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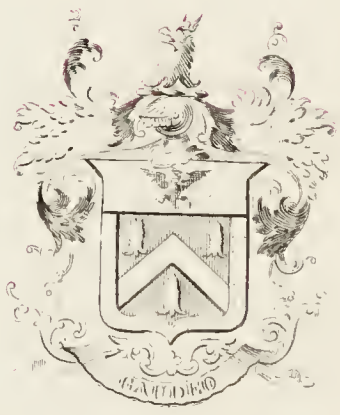

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THE

FARMER'S LETTERS

TO THE

PEOPLE of ENGLAND:

CONTAINING

The SENTIMENTS of a PRACTICAL HUSBANDMAN, on various Subjects of the utmoſt Importance:

PARTICULARLY

The Exportation of Corn.
The Balance of Agriculture and Manufactures.
The preſent State of Huſbandry.
The Circumſtances attending large and ſmall Farms.
The preſent State of the Poor.
The Proceedings of the Society for the Encouragement of Arts, *&c.*
The Importance of Timber and Planting.
Emigrations to the Colonies, *&c. &c. &c.*

To which is added,

SYLVÆ:

OR,

OCCASIONAL TRACTS

ON

HUSBANDRY and RURAL ŒCONOMICS.

LONDON:

Printed for W. NICOLL, at the Paper Mill, No. 51, in St. Paul's Church-yard.

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THE

THE
FARMER'S LETTERS.

LETTER I.

MY fellow countrymen, it is a man in obſcurity that addreſſes you—but he addreſſes you on points of the utmoſt importance ; on ſubjects which nearly concern your being *as* an independent people ; and every enjoyment of life *as* any people at all. However inelegant his language may be ; however he may be wanting in a diſplay of erudition, his ſubject and the thought and attention he has given it, will, he hopes, plead powerfully for his *manner* of treating it.

I apprehend it will be allowed by every one, that it is not only the *number* of people that is the glory of a ſtate, but their *employment*. The knowing

precisely what employments are most beneficial to the public good, is a matter of infinite consequence, but not attended to with that care it deserves. I shall endeavour in this letter as plainly as possible to elucidate this subject; to state the different degrees of populousness arising from different professions; to consider how well our present agriculture and manufactures are harmonized; and the different value to the state of the hands employed in each. This will naturally introduce the ensuing subjects, and open the way to enquiries curious, easy and important.

In a round of different professions, all must either immediately or relatively depend on each other; and some amongst them will be of that general importance as in a great measure to be the foundation of all the rest. It will require no long chain of reasoning to prove that such premier professions ought chiefly to be encouraged, as their well-being will naturally give rise to, and support the secondary ones— such a con-

a connection and dependance is conſequently natural.

Agriculture is beyond all doubt the foundation of every other art, buſineſs, or profeſſion. And it has therefore been the ideal policy of every wiſe and prudent people to encourage it to the utmoſt. I call it *ideal* policy; ſince as perfectly as its importance has been known, it has not always met with that care and attention its worth requires: and the great political management in ſtates where manufactures and agriculture are both encouraged, is to give due attention to both, but in every circumſtance to ſee that the wrong ſcale does not preponderate.

To enter into all the political reaſoning which has ſo long been employed on theſe topics, would be only to repeat what has been ſaid a thouſand times before. This is far from being my deſign; but I apprehend the ſubject far, very far from being exhauſted; and without treading in the exact paths of preceding writers, I think I can point out ſome

circumſtances which have been omitted; and others not duly conſidered by them.

To aſk one queſtion which will be entering immediately on the ſubject: *Is there any profeſſion or buſineſs which ought to be advanced to the height it is capable of, before others are encouraged which draw off the working hands from the former?*—The queſtion is clear, preciſe and determinate: agriculture, that *greateſt of all manufactures*,* ought to flouriſh to the full cultivation of the land, before what is commonly called *manufactures*, take place as articles of trade and commerce. And after cultivation is at its height, thoſe manufactures ought firſt to be encouraged which work upon materials of our own growth; and laſtly thoſe which employ foreign materials.

As agriculture therefore is the firſt and moſt important of all buſineſs, and the foundation which ſupports manufactures; let us enquire whether our

* Monteſquieu.

agri-

agriculture is at preſent at that point of perfection to which it is capable of attaining: one tranſient view of the beſt cultivated counties, will at once convince us of the contrary. If *England*, as it has been ſaid, contain thirty-four millions of acres; I have little doubt but fifteen of them are waſte and uncultivated, that is unimproved woods, downs, and commons.

Is it not therefore an enquiry worthy of the utmoſt attention, whether the moſt material object of our care is not the cultivation of thoſe waſte acres? — and whether all the hands employed in manufactures, &c. to the amount of thoſe neceſſary for ſuch culture, are not employed to the detriment of the ſtate? Provided, if they were otherwiſe employed than they are at preſent, it would be in the purpoſes of ſuch cultivation. The moſt impartial conſideration of theſe points leads me readily to anſwer that all ſuch manufactures are prejudicial.

The anſwer to this argument which I apprehend moſt likely to come — is

 this:

this : That the greateſt part of that land I have called waſte, is of more uſe to the public in maintaining ſheep, and conſequently numbers of people in manufacturing their wool, than it would be if turned into arable land : And likewiſe that manufactures in general employ hands uſeleſs to agriculture, ſuch as old people and children.

That there is ſome appearance of reaſon in theſe replies muſt be allowed ; but if abſolute knowledge of the matter of fact experimentally founded, cannot be gained, as it never was yet, the reader ought to be ſatisfied with ſuch certainty as the nature of the ſubject will admit ; and from its importance to the well being of the ſtate, every one concerned ought to make thoſe enquiries which are within his reach to ſatisfy.

As to the difference between land employed in the feeding of ſheep, or raiſing cultivated vegetables ; it is a point of ſuch importance, and ſo very curious in the fair diſquiſition, that I ſhall not avoid endeavouring to eluci-

date

date it as far as I am able.—— One circumſtance ſhould be premiſed, which is, that a thouſand acres of the pooreſt arable land ever employs an infinitely greater number of huſbandry hands than a flock of ſheep does. If we conſider that there are very few ſheep-walks that have not under the ſurface a ſtratum of marle, chalk, or clay; and that ſuch manures dug, and ſpread on the ſurface, become a ſure and laſting improvement when managed with knowledge and diſcretion, we muſt allow that a noble and extenſive field is open for private and public gain, and the employment of great numbers of the beſt hands which a ſtate can poſſeſs.

This improvement has been carried to great perfection in ſeveral parts of the kingdom, and has anſwered very ſatisfactorily to thoſe farmers that have had the purſe and reſolution neceſſary for the work. I have known great numbers of ſuch attempts on various ſoils, and I do not recollect one inſtance of any failure owing to an inferiority of profit in lands after being improved:

but a general advance in the value of their productions and the profit made by the cultivator.

I know many inſtances of an advance of land from one ſhilling rent to eight, nine and ten, and this not on a ſmall farm or two, but over a large extent of country.

The general run of ſheep-walk land, when marled or clayed with judgment (which improvement coſts at an average about three pounds per acre) will produce in middling ſeaſons three quarters and an half of barley per acre, two, two and an half, and three quarters of rye, and turnips to the value of about thirty ſhillings; the mean value of theſe three crops may be about two pounds five ſhillings: the barley reckoned at ſixteen ſhillings the quarter, and the rye at twenty-four. Deduct the expences on them, and let any intelligent perſon make the compariſon between the profit and that of three years ſheep-feed: It will be found to bear none. But then comes the manifeſt ſuperiority; by introducing theſe

crops

crops in regular courſes of huſbandry, they excellently well prepare the ground for artificial graſſes ſown with the ſpring corn——and without having recourſe to burnet or other newly diſcovered plants, I may ſafely aſſert that a judicious farmer will, by means of clover and ryegraſs, maintain nearly as many ſheep on three hundred acres (laid down in courſe for three years) as before were kept on a thouſand. This aſſertion, which I venture on very good authority, ſurely is ſufficient to conclude the argument in favour of tillage——But there are yet other points to be conſidered.

Beſides the ſuperiority of the produce of the land when improved, in grain, we are to conſider that a part of the land kept conſtantly in tillage, will employ more hands than the attending the whole number of ſheep (ſuppoſing the land improved kept none) and manufacturing their wool. The hands employed by the farmer immediately are conſiderable. Whereas one man (except at the ſhearing) will take care

of

of five hundred ſheep. The employment alſo of wheel-wrights, blackſmiths, harneſs makers, &c. is of no ſmall conſequence. All this is ſuppoſing no ſheep kept; but the circumſtance of keeping nearly if not as many as before, alters that caſe greatly.

I have ſtated the improvements as commonly managed. But the practice of ſome ſmall tracts of country I have viewed, I am perſuaded is of more private as well as public advantage, in yielding a greater produce, and employing more huſbandry hands. It conſiſts in letting the artificial graſs (generally clover) remain only one year on the ground; adding to the other crops, carrots, and ſo in five years reaping rye, barley, carrots, turnips, and clover; keeping no flock, only fatting cattle.

I am perfectly well ſatisfied that the caſe as I have ſtated it, is much under the truth; for it is incredible what noble crops of corn are raiſed on improved ſheep-walks. Half the county of *Norfolk*, within the memory of man, yielded nothing but ſheep-feed; whereas

as now, thoſe very tracts of land are covered with as fine barley and rye as any in the world—and great quantities of wheat beſides. I have often in that country ſeen *Breaks* of wheat of five quarters per acre, and ſix quarters an acre of barley is common: all thoſe light lands in wet ſeaſons yield prodigious crops. A far different proſpect from flocks of ſheep wandering over the ſluggard's walks, followed each by their one ſhepherd with a boy and a couple of dogs! Think of the wealth ſuch cultivation pours into the kingdom! Think of the employment given to the beſt hands a kingdom boaſts! Think of this improvement, and then behold in the ſame country as many ſheep as ever!

The ſecond part of the objection to breaking up ſheep-walks, viz. the employment of old people and children in the manufacture of wool; ſurely falls to the ground if my foregoing reaſoning is good. For if the ſame number of ſheep is not kept by the ground in an improved ſtate—if there would be

be a certain number of ſuch hands thrown out of their employment—the increaſe of tillage would take ſome, and the trades dependent upon it, many: For it is a miſtaken idea that agriculture finds no employment for ſuch. In the villages with which I am acquainted, the farmers employ all boys that can earn four pence a day by ſpinning; indeed it is very rare to find one at that work that earns three pence; and as to thoſe very little children and old people who at preſent ſpin, not finding employment from the farmers, *they* would moſt undoubtedly meet with as good work then, conſidering the vaſt number of ſheep which muſt always be kept, let agriculture be ever ſo flouriſhing.

And here, it may not be amiſs ſlightly to conſider the different employment children and old people meet with in a farm perfectly cultivated or but indifferently ſo. Weeding—picking of ſeed corn—frighting vermin—planting peaſe and beans——dropping potatoe ſetts,—gathering and ſlicing them,—with an infinite variety of other buſi-

neſs,

neſs, will, in a large farm, perfectly well cultivated, yield far more ſuch employment, than one managed in the ſlovenly way too often ſeen.

Having, as I think, ſufficiently proved that it would be the moſt political conduct to turn all the commons and ſheep-walks in the kingdom, into arable farms; and as I have before obſerved, there are fifteen millions of acres of ſuch; the next enquiry ought to be, whether we act rationally in giving the leaſt encouragement to manufactures (always conſidering them in two lights, one working on our own productions, and the other on foreign ones) until ſuch waſte lands are duly improved and converted to the uſes of arable farms?

Let us conſider the difference between a number of men employed in manufacturing a foreign production——Silk, for inſtance—and the ſame hands employed in breaking up, and cultivating tracts of unimproved land. I am aware that it will at once be remarked, that we muſt purchaſe of foreigners (with money poſſibly) thoſe very manufac-

tures

tures which we at preſent make amongſt ourſelves. The query therefore is, Whether it would not be more advantageous to employ the hands in the cultivation of the earth, and if we muſt have thoſe manufactures, purchaſe them with the value of the earth's products? ſuppoſing the amount of each the ſame. Or, in other words, whether a thouſand men employed in manufacturing a foreign commodity are of equal value to the ſtate as the ſame number employed in the arts of agriculture?

Here it muſt be remembered, that *One million's worth of things vendible being productions from our earth, and raiſed by our own hands at home, will, when exported, bring a nation more real gain, than the ſale of three millions worth of goods in manufactures, provided the materials manufactured are purchaſed from abroad.** From hence it appears that there is a ballance of *three* to *one* in favour of the productions raiſed by the hands in queſtion on our uncultivated lands, ſuperior

* Eſſays on Huſbandry, p. 25.

to the manufactures they work upon, in value to the ſtate.

And that this ſuperiority is real, and branches out to a variety of other intereſts, is manifeſt if we conſider the difference in *ſtability* of a commerce founded on the *neceſſities* or *ſuperfluities* of life. The demand for corn will always, in every human probability, be more regular and certain than that for ſilk or any other elegant manufacture; our preſent experience teaches us this fact, ſince of all the branches of our extenſive trade, none is ſo univerſally beneficial as that of corn. *England* in five common years, namely from 1745 to 1750 incluſively, ſhipped off in grain of all ſorts, to the amount of 7,405,786 pounds ſterling, which, as has been obſerved before, is equivalent, in national advantage, to 22,000,000 raiſed by manufactures exported, when the materials are not our own production. The infinite importance of ſuch a trade muſt appear from hence ſufficiently ſtriking. Such a vaſt demand for our corn, having ſo long continued an almoſt regu-

lar

lar trade, we ought ſurely with all imaginable attention to encreaſe the culture, not only to enable us to continue, but even encreaſe the quantity exported, as an increaſe of the growth will be attended with a falling in the price, which will conſequently add to the permanency of the commerce, by inducing foreign nations rather to buy their corn of us than to cultivate it themſelves.

That this is a probable conſequence may be inferred from the conſtitutions, cuſtoms, manners and religion of ſeveral countries in Europe, which are unkind to the cultivation of the earth; and ſo oppoſite to that general freedom which is the life of agriculture, that it may be a meaſure more eaſy, ſure, and ready to purchaſe corn of us, than to go about the great buſineſs of cultivation themſelves. Does it not therefore behoove us greatly to take eſpecial care of their being ſure in their dependence on us, and not, when their day of ſcarcity comes, refuſe them ſuch a neceſſary of life.—No; not on any conſideration;

tion ; for it is not to be imagined that the loſs is only during the time we think proper to prohibit our exportation : If that happens often to be the caſe, we are lucky indeed — Much greater reaſon have we to expect that ſuch people, diſappointed in ſo neceſſary an importation, will either go all lengths to raiſe a ſufficiency, (and wherever that is the caſe *more* than a ſufficiency) or turn their eyes to ſome wiſer people for a ſupply.

Now the enabling ourſelves to ſupply foreign nations in a regular and ſure manner, and alſo keeping the price of corn at a *proper* height, can only be effected by *fully* cultivating the earth, before hands are ſuffered to be employed about any manufactures but what are abſolutely neceſſary. —— I ſay *abſolutely* neceſſary ; ſince thoſe between which and agriculture there is a *mutual* dependence, will relatively be encouraged by advancing agriculture.

There is not only a great ſuperiority in the value to the ſtate of the productions of the earth raiſed, for inſtance, by

a thouſand hands—over the manufactures wrought by a thouſand hands, in a foreign commodity; but thoſe employed in agriculture will find a more ſure and regular dependance on their buſineſs than any manufacturers can. Popular riots, inſurrections and complaints are infinitely more common amongſt the latter than the former, which, *when founded in reaſon*, is a very plain proof that they do not meet with ſuch conſtant work as their regular maintainance requires. At ſome particular times their earnings may be conſiderable; but ſuch irregular advantages amongſt a ſet of men remarkable for ſpending in one day the wages of three, when in one day they can earn the pay of three, is of very little uſe to themſelves, their families, or their country. Whereas the people employed in agriculture are equal in their earnings; their pay is ſmall, but then it is conſtant—they are not flung out of work for a ſingle day—nor do they, except at ſtated regular times, like harveſt, earn enough in one week to make them lazy for three;

three; and as theſe beneficial ſeaſons come ſo regularly, they are ſeldom attended with the ill conſequences ſo remarkable in the other caſe. The labourer's pay is low during winter, it riſes gradually to harveſt, and then ſinks again, but not immediately; and this variation is not owing to any accidental cauſe, but comes regularly with the ſeaſons. Any ſuch ſudden change as a mourning on the one hand—or an unexpected demand for goods on the other, never ſtarves him with the total want of employment—or on the contrary, pours a tide of money on him pernicious in every conſequence.

The ſtriking corollary to be drawn from theſe particulars ſurely is this: *Never to obſtruct or in any meaſure detriment the ſale of the cultivator's products in favour of the people employed in manufactures.* Enabling our manufacturers to ſell their goods cheap to foreigners, is undoubtedly a wiſe meaſure——but it ceaſes to be ſuch, when effected (ſuppoſing it ever was) by cramping the ſale of the produce of our lands: Becauſe

more than we gain by one meaſure we loſe by the other. But conſtant experience evinces that whatever increaſes the ſale of a production, likewiſe increaſes the quantity of it; therefore if we would have bread cheap for our manufacturers, we ſhould ſuffer the exportation of corn to be conſtant and unobſtructed.

I have hitherto ſpoke of manufactures rather in a general ſenſe, and but ſlightly diſtinguiſhed between thoſe which are worked up from our own productions, and ſuch as are wrought from foreign ones. What proportion the number of hands employed in the firſt, bear to the number neceſſary to *complete* our cultivation, I cannot preciſely aſſert: But if they were all employed towards perfecting ſuch cultivation, I have reaſon ſufficient to believe their labour would be attended with an infinitely greater benefit to the public.

As to thoſe manufactures which are wrought from our own products, reaſon at once tells us that they are of infinitely greater value to us than the others.

others. This is a maxim ſo ſelf-evident that it needs no proof. The chief of theſe are wool and leather. And here it is worthy of obſervation that our moſt valuable manufactures are ſo very nearly connected with agriculture, as to depend on the farmer for their very being. I have already drawn part of a parallel between a ſheep-walk remaining for its old purpoſe, or converted into an arable farm; from whatever knowledge I can gain on the ſubject, there is the cleareſt certainty of the ſuperior value of the latter: —— that is, the value of the productions of the farm in corn, neat cattle, &c. added to the quantity of wool which it will yield in its improved ſtate (ſuppoſing fewer ſheep are then kept, which I have no reaſon to believe is the caſe is all together a ſource of infinitely greater public and private wealth than the ſame land occupied ſolely in feeding ſheep. And yet how many times has the meaſure of breaking up ſheep-walks been cenſured by men whoſe intelligence one might have thought better founded?

As to the other manufacture, that of leather, it is well known the quantity of hides would be greatly encreaſed from the conſumption of turnips, ſtraw and hay, above what would be neceſſary for winter proviſion for the ſheep.

Wool has been ſo long ſuppoſed the ſacred ſtaple and foundation of all our wealth, that it is ſomewhat dangerous to hazard an opinion not conſonant to its ſingle advancement. But if the cultivation of the land and the manufacture of wool ſhould come in competition; the former ought to be encouraged in preference. But be it ever remembered, that the wiſe policy in all caſes is to *harmonize* agriculture and manufactures—and if one is in need of encouragement, it ought ever to receive it *if poſſible* without prejudicing the other.

In reſpect to the different importance of the produce of corn and the manufacture of wool, another circumſtance ought not to be omitted, which is, that corn finds a more regular and conſtant ſale than cloths— that foreign

nations

nations make greater advances in manufactures than in agriculture, owing perhaps to the former's flouriſhing better than the latter under arbitrary governments ——That we have loſt the trade of cloth to *France*, owing to the manufacture at *Abbeville* ; and are declining in many other places where agriculture is not encouraged equally with their manufactures. All people muſt eat bread, and if they are wanting in that wiſe policy of providing it in preference to clothing, we ſhall, to our glorious advantage, find our profit in ſupplying them with the one, how ſoon ſoever we may be beat out of the other ; —— *provided* the contrary event does not ariſe from the want of a regular and perpetual exportation.

In theſe affairs the example of *France* ought to deter us from a mad rage in favour of manufactures. I ſhall copy here the words of a true politician.—— " *Colbert* rather depreſſed than promoted the intereſts of *France*, when he conceived a project of enriching it by eſtabliſhing a vaſt number of manufactures,

flattering himſelf at the ſame time, that by making the productions of his manufactures ſubſervient to luxury and falſely refined elegance, he ſhould multiply the wealth of his own nation by ſupplying and feeding the extravagance and vanity of other nations; *but ſome part of the folly happened to ſtick where it took its riſe, and became infectious at home*; which ſhows that luxury is an unfortunate faſhion in any country, though at the ſame time it preſcribes the mode to foreigners, and induces them to purchaſe ſuch merely ornamental elegancies as are the workmanſhip of our own artiſts. Under the idea of hoarding up great quantities of proviſions for the ſupport of his workfolks *(and that principally by obſtructing the free vent and exportation of corn)* this miniſter had the applauſe of the poor, who naturally favour any ſcheme, real or imaginary, that promiſes to lower the price of bread; for their underſtandings can rarely ſee deeply into the truth of things, any more than the advantage of a nation in general, or

of

of themſelves upon the whole. In like manner, the hiſtorians and poets loaded the prime miniſter with panegyrics, as the true father of the people, and made no ceremony to depreciate the wiſer conduct of *Sully*. But alas! it never truly appeared that trade and commerce, even in their moſt flouriſhing ſtate, enriched a kingdom like the ſolid revenues that proceed from a right and effectual cultivation of the earth. Thus, though the *French* nation was intoxicated with the hopes of immenſe riches, and though they ſupplied all Europe with ſilks and embroideries and expenſive trifles, yet the fund of real wealth was deficient at bottom, *Famine made its appearance frequently and almoſt periodically*. The proprietors of landed eſtates (for they with others at firſt ran into the univerſal notion of admiring the project) thought themſelves very happy, after a conſiderable tract of time, to advance their rents a *ſixth* part, though money bore *one third* a greater value than before: Impoſts and taxes were increaſed immoderately: And a conſider-

conſiderable part of the lands (not being found, or, at leaſt, not believed to anſwer the expences of cultivation) was overlooked and neglected by little and little, and, at length, degenerated into waſte and deſolated tracts of country. All which may ſuffice to ſhow, that the cultivation of the earth ought not to be ſuperſeded by a paſſion for commerce.*"

The point of balance between agriculture and manufacture muſt be conſidered in another light. It is ſuppoſed that ſtopping the ſale of the earth's productions is an encouragement to our manufactures: I think I have already proved that was the effect ſuch as is ſuppoſed, it would be a moſt impolitic meaſure. But I ſhall now offer a few conſiderations to diſplay the falſity of the expectation—and venture to aſſert that the lowering the price of proviſions is of no uſe to our manufactures. This is a very fruitful ſubject, and would admit of many reflections of the utmoſt importance to the good of manufac-

* Eſſays on Huſbandry, p. 179.

tures

tures in general; but I ſhall be ſhort in what I have to offer on this head, as the matter has been handled in a very ſenſible manner already†.

We ſhould, in the firſt place, take a view of populous manufacturing countries, and obſerve if proviſions bearing a high price adds to the dearneſs of their manufactures. Amongſt ſuch people, the *Dutch* hold the firſt rank. Now it has been aſſerted §, and it ſeems on perfectly good authority, that a *Dutch* manufacturer pays near a third of his earnings in taxes — an *Engliſh* manufacturer not above one tenth. — Again; ſuch bread as the *Engliſh* manufacturer eats, the *Dutchman* muſt pay three pence per pound for, and buys his fleſh at nine pence per pound. And if the prodigious national debt of *Holland*, which, with the ſtanding expences of the ſtate, &c. occaſion a prodigious variety and height of taxes, was not attended with this effect, it would be very ſtrange: Nor ſhould we forget the ſmall quantity of their land, with their numerous

† Conſiderations on Taxes, 1765. § Ibid.

inha-

inhabitants, as a contraſt, which greatly adds to the price of proviſions. Nevertheleſs, great as the price conſtantly is, loaded as they are with taxes, the *Dutch* manufacture the products of a variety of countries, and afford them at a lower rate at market than any people among whom the neceſſaries of life are cheaper. Hence Mr. *Locke* long ago obſerved, that the frugality and induſtry of the *Dutch* was ſo great *from the high price of proviſions*, that they would buy our rape-ſeed, make it into oil, and ſell it cheaper than we do.—Notwithſtanding the vaſt weight in expences of food and taxes under which the *Dutch* labour, yet their daily pay is not above fourteen pence.

The ſame circumſtances may be obſerved in *France*; the price of bread there is often ſix times above its average; and as to their taxes, they do not only amount to far more than ours, but are collected in the moſt burthenſome manner, and fall infinitely heavier on the poor people in proportion, than on any claſs in the ſtate. Nevertheleſs labour

is there three times as cheap as with us; by which means the *French* are enabled to underſell us in all markets where there is a competition between us.*

Now, on the contrary, take a view of thoſe countries where the neceſſaries of life are extremely cheap, and it will invariably be found that ſuch countries are neither well peopled nor do manufactures flouriſh amongſt them. This fact is too well known to require illuſtration.

As theſe facts are very ſpeaking, and as the example of our own country adds to the proof, it is worth inquiring into the reaſons of theſe facts, which are ſupported by the concurrent teſtimonies of variety of times, nations, and authors: It is a certain fact that manufactures

* The point which I here aim at proving, has been the opinion of the moſt ſenſible politicians. Sir *William Temple* ſays, "In order to advance the "trade of *Ireland*, proviſions muſt be rendered ſo "dear as to enforce general induſtry." ——— Sir *William Petty*, Sir *Joſiah Child*, Mr. *Polixfen*, Mr. *Gee*, and others, have all concurred in the ſame obſervation, viz. that trade can never be greatly extended *where the neceſſaries of life are very cheap*. The author of the *Vindication of Commerce and the Arts*,

nufactures never flouriſh in countries where bread, and conſequently other proviſions are very cheap.

There is not a more common argument than pleading for the neceſſity of ſupplying our manufacturers with proviſion cheap, that they may afford to work cheap, and their maſters to ſell cheap : This chain of concluſions is ſo obvious and natural, that it is at once taken upon truſt, and conſidered, contrary to all experience, as matter of reality. But the truth is, workmen work to live ; and if four days earnings are ſufficient to maintain them ſix, they will be idle the remaining two : This, beyond all doubt, is the reaſon for the foregoing aſſerted facts being true. There is not a more pernicious evil to manufactures than idleneſs among the

Arts, ſays, " The reaſon why commerce ſeldom " flouriſhes in a fertile country thinly peopled, is " becauſe land being there of ſmall value, from the " ſcarcity of inhabitants, proviſions are cheap and " plentiful, and labour dear." ———See alſo Dr. *Franklin* in his *Obſervations concerning the Increaſe of Mankind* ; and Mr. *Locke*. *De Witt* ſays, " That " high taxes promote invention, induſtry and fru- " gality." —Conſiderations on Taxes, p. 29.

workmen :

workmen: if they ſpend a day or two in the week without work, it hurts them when they do work—their labour during the time is loſt to the ſtate—and cheapneſs of living enables them to treat their maſters in a manner not to the ſervice of the buſineſs in general: On the contrary, when proviſions are ſo dear that they are obliged to ſtick cloſe to their work for a maintainance, the trade has the benefit of all their labour —and buſineſs goes on ſo regularly that the maſters are enabled to ſupply the market cheaper than when a great plenty allows the workmen to earn in a ſhort time what will ſuffice for their maintainance during a longer. " Thoſe, ſays the author of the *Conſiderations*, who are concerned in the manufactories of this kingdom, know, by experience, that the poor do not labour, upon an average, above four days in the week, unleſs proviſions happen to be very dear. When this is the caſe, a general induſtry is immediately created, the poor crowd about the houſes of

maſter manufacturers, begging for work almoſt at any rate: —— The quantity of labour then offered tends to lower its price, and the populace work five or ſix days in a week inſtead of three or four, becauſe they cannot live by working leſs. The very reverſe of this happens when wheat and other proviſions are at a low price. Tippling houſes and ſkittle-grounds are then crowded, inſtead of their maſter's court yard; idleneſs and debauchery generally take place; labour grows ſcarce, and maſters are obliged to ſeek it, and court the labourer to his work. Experience evinces that this is the true, though melancholy ſtate of the caſe; and from hence it appears, that the poor might live comfortably by working ſix days in the week, even though neceſſaries were taxed double to what they are at preſent."

From the foregoing facts and remarks, may we not juſtly draw ſome very important concluſions? Does it not appear, *Firſt*, That agriculture is the

the true foundation of all the wealth which can flow into this nation — whether it be immediately from commerce or manufactures. *Secondly*, That we have vaſt tracts of uncultivated land, and much cultivated in an incomplete manner; and that our firſt and moſt important buſineſs ought to be to advance the culture of the whole to the higheſt perfection. *Thirdly*, That this great improvement ſhould take place before any encouragement is given to encreaſe the number of manufacturers, it being proved, that, until ſuch cultivation is complete, the generality of manufactures are a prejudice to the ſtate, in *that circumſtance* of not being employed about the *moſt important concern* of it. *Fourthly*, That it is in the higheſt meaſure impolitic, in any degree or manner, to obſtruct the free ſale of the earth's productions, on a ſuppoſition that ſuch a conduct will be of advantage to manufacturers, ——or on any ſuppoſition whatever; ſince ſuch management is proved very bad, from all experience.

Theſe are the plain corollaries which appear to me naturally ariſing from a fair ſtate of the foregoing caſe: I hope I have ſufficiently proved the truth of moſt of the facts, and the great probability of the reſt, from which I have drawn the above deductions.

LETTER II.

HAVING as I think, my beloved countrymen, proved the vaſt and *ſuperior* advantages of agriculture, I ſhall next examine ſome peculiar and ſtriking methods of encouraging it,—and enquire into its preſent ſtate. In this letter, I ſhall confine myſelf to that *great foundation of diverſity of opinion*, the Exportation of corn.

In all ſuch matters as theſe, it is much the moſt ſatisfactory method of treating them, to diſplay, firſt, the facts (and luckily this ſubject will afford me many very ſtriking ones); and ſecondly, draw ſuch concluſions from them, as readily ariſe from their nature.

The exportation of corn firſt received a bounty in the year 1689; and, as it has by many been thought to advance the price of wheat at home, by that means ſtarving our own manufacturers to enable foreign ones to work cheap, it is, in the firſt place, neceſſary to en-

quire into this fact, for common talk, or news-paper declamation, is of no authority when arguing againſt fact. The prices, &c. of corn I know have been publiſhed often before, but it is abſolutely neceſſary to inſert them here; I ſhall be as ſhort in my abridgements as poſſible; but ſuch facts are the foundation of every juſt argument that can be urged for or againſt any meaſure.

The following table, ſhewing the mean price of wheat at *Windſor* market at ſeveral periods, for one hundred and ſixty-nine years, is what I ſhall firſt offer to the reader.

	Years	l.	s.	d.	Years	l.	s.	d.
From 1594 to 1612	19	2	2	5¼				
1613 to 1637	25	2	7	4	69	2	8	5¼
1638 to 1662	25	2	15	8				
1663 to 1687	25	2	5	3½	25	2	5	3½
1688 to 1712	25	2	8	5½				
1713 to 1737	25	2	0	7½	75	2	2	5¼
1738 to 1762	25	1	18	2¾				

By this it is evident, that wheat has been cheaper the laſt 75 years, ſince the bounty commenced, than it was for ninety-four years before. It is farther obſervable, that for the firſt ſixty-nine

years, the price of wheat was continually riſing, and ſince the bounty was given, it has been continually ſinking; which ſeems to be a plain proof that this ſinking of the price was owing to the bounty. The twenty-five years from 1663 to 1687 are ſtated ſeparately; becauſe in that period a duty was firſt laid upon the importation of corn; which, with two additional duties afterwards, amounted almoſt to a prohibition; the conſequence of which is here viſible in the price, for wheat, which for many years before was riſing, did at this time ſink more than ten ſhillings a quarter *.

It is impoſſible that a ſtronger proof than this ſhould be advanced, of the certainty of the aſſertion I made before, viz. the exportation of corn gives plenty, and conſequently cheapneſs at home; and now I may add, that preventing our receiving any from abroad is attended with the ſame effect.

Theſe facts bear ſo much the appearance of paradoxes, that I have heard

* See E. S.'s very ſenſible letter, *Muſeum Ruſticum*, vol. vi. p. 22.

numbers laugh in ridicule at the very mention of them: and the poor of this country treat them with a ſcorn which ſometimes breaks into riots. Yet ſtrange as the mere aſſertion may ſound, the proofs of the truth of it are ſo clear and ſelf-evident, that the wonder is it ſhould ever be thought paradoxical.—— But farther——

The fourteen higheſt annual prices of wheat *before* the bounty was given, are as follows.

l.	s.	d.
3	9	6
3	8	0
3	13	8
4	5	0
4	0	0
3	16	8
3	13	4
3	5	0
3	6	0
3	10	0
3	14	0
3	8	8
3	4	8
3	0	0
49	14	6
Aver. 3	11	0

The fourteen higheſt prices *ſince* the bounty.

l.	s.	d.
3	7	8
3	4	0
3	11	0
3	0	0
3	8	4
3	4	0
3	18	6
3	18	0
3	0	0
2	13	0
2	14	0
2	14	6
2	11	0
2	10	8
43	14	8
Aver. 3	2	5

Laſt period cheaper than the firſt by } 0 8 7

This inferiority of price is a ſufficient anſwer to thoſe who aſſert, that ſuch a prodigious exportation as we ſometimes carry on, when the crop abroad fails, raiſes the price in ſome particular years to a height unknown before the bounty, and intolerable to our own poor.

But there is another circumſtance not to be forgot, which is clear, ſtriking, and deciſive: the price of all other things is advanced a fourth part within theſe hundred years, owing to a vaſt extenſion of commerce, which has rendered money ſo much more plentiful than before. Therefore the foregoing prices do not diſcover the *real* ſinking of that of wheat, unleſs we deduct from every year the proportion of the riſe of the price of other things: this will diſplay the vaſt plenty of corn, which the exportation has given to the nation, for nothing but ſuch a plenty could be attended with a conſtant lowering of the price.

This fact is ſo very clear and evident, and the concluſion, *that it is all owing*

to the exportation, ſo very natural, that the reader is deſired never to forget the certainty of it; nor, whatever ſeeming contradictions there may appear between the *quantity* exported, and the greatneſs of the *effect*, ever to doubt of this firſt fact and foundation of all our reaſoning: it is ſo very *ſure* that he need not be apprehenſive of giving total credit to it.

As the exportation has been of *this* great advantage to the ſtate, let us next enquire into the immediate profit of it, ariſing to us from the ſale of the corn. Of this it will not be at all difficult to lay before the readers of theſe letters, a very clear, ſatisfactory, and authentic account. The accounts of the quantity exported, which were laid before the parliament, reach no further back than 1697; I ſhall therefore inſert the extracts I have copied from that year*.

* See Three Tracts on the Corn Trade and Corn Laws, p. 133.

Account

Account of Corn Exported from 1697 to 1765.

From 1697 to 1706, 9 Years.

Grain.	Quarters.	B.	Value.		
Barley	251,689	7	207,644	2	11
Malt	623,345	4	374,007	6	0
Oatmeal	2,015	4	2,494	3	7
Rye	238,985	7	288,777	0	3
Wheat	552,867	2	1,002,071	17	9
	1,668,904	0	£. 1,874,994	10	6

From 1706 to 1726, 20 Years.

Barley	433,237	2	404,354	15	4
Malt	4,381,205	0	2,628,723	0	0
Oatmeal	11,922	0	16,690	19	6
Rye	789,618	6	931,092	2	2
Wheat	2,518,213	4	4,448,843	17	0
	8,134,196	5	8,429,704	14	0

From 1726 to 1746, 20 Years.

Barley	590,080	6	523,696	13	3
Malt	3,871,332	4	2,322,793	10	0
Oatmeal	45,932	3	61,051	15	4
Rye	520,020	6	517,853	19	11
Wheat	4,461,337	4	6,654,828	8	9
	9,488,703	7	10,080,224	7	3

From

From 1746 to 1765, 19 Years.

Grain.	Quarters.	B.	Value.		
Barley	1,268,088	1	1,157,130	8	3
Malt	4,777,303	6	2,866,382	5	0
Oatmeal	67,186	4	91,821	11	0
Rye	939,580	7	990,474	16	11
Wheat	6,800,017	1	10,766,693	15	7
	13,852,176	3	£. 15,872,502	16	9

TOTALS.

	Quarters.	B.	Value.		
9 Years.	1,668,904	0	1,874 994	10	6
20	8,134,196	5	8,429,704	14	0
20	9,488,703	7	10.080,224	7	3
19	13,852,176	3	15,872,502	16	9
68	33,143,980	7	£. 36,257,426	8	6

If theſe totals are not ſufficient to open the eyes of every perſon prejudiced againſt the exportation of corn, I know not what will. Think of the vaſt number of hands the raiſing theſe thirty-three millions of quarters found employment for. Hands, the moſt valuable a ſtate can boaſt! Think of the number of ſailors the ſhipping (all our own) employed, which carried out this

corn!

corn! the very freight of which amounted to above three millions ſterling. Think therefore, my countrymen, of one branch of our exports, bringing in *forty millions* ſterling! This Forty, as I have elſewhere obſerved, is of equal value with *one hundred and twenty millions* worth of manufactures exported, if wrought from foreign materials. Theſe are facts which ſpeak trumpet mouthed in favour of this noble and truly beneficial meaſure, which is the foundation of our national wealth, not only in the mere amount, however conſiderable, but in an infinite variety of intereſts affected by it, —and the moſt certain reſource we can ever depend upon.

It is eagerly remarked by thoſe who will not allow that the exportation of a commodity encreaſes the quantity of it, that it is impoſſible ſo immenſe a quantity as thirty-three millions ſhould have been exported, and yet the quantity at home been on the encreaſe. But ſuch people do not ſufficiently conſider how much a lively demand and quick ſale en-

rages the cultivator to proceed in his buſineſs with ſpirit and alacrity; new ground is broke up, and the plough triumphs! But as theſe aſſertions do not ſatisfy prejudiced people, who are alarmed at the *largeneſs* of the *whole* quantity; I ſhall here ſhow them how ſmall a proportion the exported quantity bears to the whole growth.

The ingenious author of the *Eſſays on Husbandry* reckons the arable land of the kingdom at fifteen millions of acres. "From theſe fifteen millions," he goes on, "we will deduct a third part for fallow land each year, (note: *we are ſenſible this allowance is too great in fact, but it is what ought to be in all countries where husbandry is rightly managed)* and then there will be left ten millions of arable acres *de facto*. From theſe ten millions let us ſubſtract one fourth part of the grain raiſed for feeding and fattening cattle, &c. (comprehending what is deſtroyed by birds, inſects, and the like) and another fourth part for malting, diſtilling, and

feed-

feed-corn*, and then the reſidue will be five millions for making bread, or raiſing leguminous crops like field peaſe, or cultivating field potatoes, &c. which ſupply the place of bread. Five millions of acres of wheat, barley, rye, will, at an average of three quarters per acre, produce fifteen millions of quarters †."

By this account, the quantity of bread-corn is fifteen millions of quarters; but by the following it amounts only to about nine millions and an half; however, field peaſe and potatoes are not taken into the account.

General accounts of Corn conſumed, &c.

	Growth.	Conſumed.	Export.	Import.
Barley	4,603,272	4,433,125	171,253	1,106
Oats	4,240,947	4,252,725	3,737	15,515
Rye	1,063,652	1,030,000	36,591	2,939
Wheat	4,046,603	3,840,000	210,771	4,168
	13,954,474			
Seed ‡	1,395,447			
	15,349,921	13,555,850	422,352	23,728

* I have no conception that the conſumption cauſed by cattle equals theſe articles.

† Eſſays on Husbandry, p. 85.

‡ The ſeed is called *one tenth*.

My

My chief motive for inſerting this account is to ſhow the reader the *proportion* between the different quantities; as this is a point of very great importance to my preſent argument.

The export is bare *one thirty-ſecond* part of the conſumption; *one thirty-third* part of the growth excluſive of the ſeed; *one thirty-ſixth* part of the growth including the ſeed; and not near *one third* of the ſeed itſelf, ſuppoſing it only *one tenth* of the growth §.

If we ſuppoſe, the four millions of quarters of wheat, the produce of one million ſix hundred thouſand acres, which is two quarters four buſhels per acre (near I believe the medium) then the export will only amount to *one buſhel per acre*, of wheat. From this remarkable fact, let the enemies of the bounty determine the exportation to be the cauſe of the high price of corn! They

§ When the exportation ran the higheſt ever known, 1750, *it* ſurpaſſed the ſeed only *one twelfth* part.—*Three Tracts*, p. 144.—and it is remarkable that year the price at home was ſo low as 32 s. 6 d. per quarter——and the next year 38 s. 6 d.

may

may come to this determination if they pleaſe——but it muſt be while they are blinded with prejudice.—Converſe with the moſt ſenſible cultivators in every county of the kingdom, and learn of them whether they think a buſhel per acre any material deficiency of a crop, —they will anſwer *No* ; *that they ſhould never complain of any crop that fell only a buſhel ſhort of their expectation.* That a deficiency in the crop infinitely oftener extended to a quarter and half or two quarters. See therefore how much more likely it is, that a light crop ſhould raiſe the price, than the exportation : in fact, corn being at a high price in *England*, is *never* owing to the exportation, but to a deficiency of crop.

So far indeed has the bounty been from raiſing the price of corn at home, that, as I have before proved, it has conſtantly lowered it ; and *here* lies a vaſt ſaving to the nation, which is not conſidered by thoſe who plead againſt the meaſure. *Since* the bounty, wheat, on an average, has been nine ſhillings and three pence per quarter cheaper than

before,

before, if reckoned at the mean fineneſs of quality, and the *Wincheſter* meaſure in quantity *. Now the ſaving of this ſingle article in 68 years (during which time accounts have been laid before parliament) amounts to upwards of *One hundred millions ſterling !* The gain therefore to the nation ariſing from the bounty, amounts clearly to one hundred and forty millions ! without reckoning the infinite variety of hands employed by ſuch additional cultivation.

As blind as ſome, in this country, may be to ſuch immenſe advantages, all foreigners are not : the late proceedings of the *French* ought to create in us a very horror at the idea of *obſtructing* ſuch a prodigiouſly valuable trade. Popular clamours, raiſed by intereſted people, ought never to be hearkened to : facts alone ſhould be attended to ; and facts will ever diſplay in the ſtrongeſt manner, the miſerable politics of letting a ſet of idle, debauched, and inſolent manufacturers———*riot* us into

* *Three Tracts*, p. 43.

meaſures

meaſures pernicious to the well being of the kingdom.

In *July* 1764, the *French* king, in the moſt ſolemn form, iſſued out a perpetual and irrevocable edict, to authoriſe and encourage the exportation of corn: and nearly at the ſame time another, allowing all perſons to trade in corn, and to circulate it freely throughout the whole kingdom *. This wiſe and truly political conduct ſhould make us eagle-eyed, to the preſervation of ſuch a glorious commerce. If we are ſo infatuated as to tamper with the bounty which has gained us ſuch wealth, we may expect that our indefatigable neighbours will take advantage of ſuch a conduct—and meet us as competitors in every market. This has been too often the caſe in other branches of trade, heaven forbid it ſhould come to paſs in this!

In all affairs relative to agriculture, we ought ever to regard a guinea raiſ-

* Theſe remarkable edicts were gained through the application of M. *Pattullo*, a *Scotch* gentleman, author of the treatiſe entitled *Eſſai ſur l'Amelioration des Terres*, 12mo.

ed by cultivation as materially different in value to us from a guinea raiſed by any other trade, profeſſion or buſineſs whatever : indeed its value ſo procured is infinitely greater, conſidered as a real ſource of national wealth. But never let my countrymen compare the plunder gained from a conquered enemy, or any immenſe private fortunes ſuddenly gained, as of comparable value to the ſmall, but immenſely valuable fortunes made by agriculture. Bravery and conduct exerted in the public ſervice, deſerve great reward—all they meet with—but ſuch fortunes encreaſing that inequality among mankind which is of no kind influence to huſbandry, ought never to be regarded as a *public* benefit. A true politician will ſee at one glance, the difference *to the ſtate* of ten thouſand pounds gained at once by plunder, and the ſame ſum acquired by a diligent and induſtrious cultivator ! Great and material is the difference !

Having in this manner given my ſentiments, on the benefits ariſing from a

bounty on exported corn, and I hope proved their juſtneſs; I ſhall in the next letter conſider of ſome material points in the immediate practice of rural œconomy, which are at preſent general topics of converſation, and deſerve the cloſeſt attention of all true patriots.

LETTER III.

HAVING in my two preceding letters proved the great and real importance of agriculture to this kingdom; and ſhewed that it is the true foundation of all our wealth; I ſhall now proceed to enquire into the merits of ſeveral practices at preſent common in our rural politicks, and ſtate, as accurately as I am able, the good or ill conſequences reſulting from them.

I might enter into a long diſcuſſion of encloſures, was it not a ſubject abſolutely exhauſted by preceding writers; and here I ſhall refer the reader particularly to the Memoirs of the Berne Society, in whoſe valuable volumes much important knowledge of this ſubject may be gained. The univerſal benefit reſulting from incloſures, I conſider as fully proved; indeed ſo clearly, as to admit no longer of any doubt amongſt ſenſible and unprejudiced people: thoſe

who argue now againſt it are merely contemptible cavillers.

* * *

THE different circumſtances attending large or ſmall farms are matters now of the moſt ſerious attention. Complaints are every where made of engroſſing farms, as it is called——and the cry againſt the practice is reſounded from one ſide of the kingdom to the other, with every circumſtance that can aggravate the ill conſequences that attend it. I ſhall enter into a cool and diſpaſſionate enquiry into the real ſtate of this celebrated caſe : I have long conſidered it with the utmoſt attention, and will impart to the reader the reaſons of the ſentiments I have adopted, *for* and *againſt* the caſe, on the moſt attentive examination. The four heads, under which farms in general are naturally to be conſidered, are,

Firſt, The quantity of produce, and the value of it to the farmer and the public.

Secondly, The number of people employed.

Thirdly, The different value to the ſtate of the hands employed in each.

Fourthly, Of the difference of advantage to the landlord.

Firſt, Of the quantity of the produce, and the value of it to the farmer. It muſt appear very clear to every one who is the leaſt converſant in huſbandry, that farms muſt vary in their produce according to their proportion between the ſubſtance of the farmer, and the quantity of the land he occupies. The material enquiry to be made here, is, Whether a great farmer cultivates his land in a more perfect manner than a little one? In conſidering this queſtion, I muſt make a diſtinction between a rich and poor ſoil; for whatever doubt there may be of the ſuperior advantage attending either great or ſmall farms in general — there can be none about them when conſiſting of poor land.

Farms on ſuch a ſoil have generally a ſheep-walk, and in the *preſent mode*

of

of culture cannot be managed to the greateſt advantage, without keeping a flock large enough for a fold. Now ſuch a flock requires a much larger capital than any little farmer can poſſeſs; for if he did poſſeſs it, we may naturally ſuppoſe he would no longer be a *little* farmer. Another circumſtance to be conſidered, is, the courſe of huſbandry ſuch light ſoils are generally thrown into, which conſiſt very much of turnips and rye-graſs with clover; theſe crops require, if well farmed, more cattle to conſume them than the flock, and theſe are generally either a dairy of cows, or neat cattle. All this whole courſe of huſbandry is ſuperior to a ſmall capital. It is generally reckoned, that the buſineſs of folding goes off very ſlow, with leſs than four hundred ſheep: I know of no *flock* that conſiſts of leſs. Theſe, at ten ſhillings a ſheep, alone amount to two hundred pounds; one fourth of which ſingle ſum is ſufficient to ſtock a little farm with. Again: A light ſoil, generally ſpeaking, has under it a bed of marle or clay, which is

the common manure uſed for it— and I may add *is* uſed for it by all good farmers on ſuch a ſoil. To marle or clay an acre of poor land, cannot be done under three pounds, if it is done effectually. Indeed, when the manure is cragg, much fewer loads are ſufficient; but, as all I have ſeen lies deeper than marle or clay, the expence of getting at it is the heavier. Three pounds per acre is infinitely too heavy an expence for any little farmer. I could offer other reaſons to prove that it would be a ridiculous practice to parcel out a poor country into ſmall farms —— that it would never tend to the improvement of the ſoil—— and that it would generally be attended with the ruin of the farmers who were ſo imprudent as to hire ſuch farms. ——The caſe of rich lands, however, admits of more doubt.

Farms may be divided into ſuch as employ one plough— two — large farms —— very large ones, and grazing farms.—But it is neceſſary to explain the original of my ideas of theſe diſtinctions.

tions. I am pretty well acquainted with the huſbandry of ſeveral counties, but know little concerning thoſe farms, in ſome, which are entirely cultivated by oxen. Thus I am not able to point out the ſize of thoſe farms in the oxen counties, which anſwer to one or two, &c. horſe ploughs. What I mean by a plough, is one man and two horſes, no driver.

If we examine the generality of little farms, we ſhall find theſe circumſtances attend moſt of them. The land let per acre at a much higher rent than the neighbouring middling and large farms ——cultivated with one plough——one cart kept, which, with the addition of ladders, ſerves by way of waggon for the carriage of corn, hay, &c. On ſome, however, a waggon is kept, and then it is tumbril beſides.— The cows, if any, of a poor and ſtinted kind—no ſheep kept. Theſe are generally the chief circumſtances relative to the ſtock.

Such a farm as this, being the firſt ſtep which thoſe labourers, ſervants or

others

others in general take when poſſeſſed of money enough to begin buſineſs, it is of courſe entered upon the moment they have wherewithal to ſtock it.—The horſes that are bought are ſcarce ever ſtrong and able for hard work, as there is a very material difference in the price of ſuch, and what we uſually ſee in a little farmer's ſtable. This ſingle article is attended with no inconſiderable loſs to the farmer; for it is a matter of fact which needs no illuſtration, that weak horſes will not perform the buſineſs of a farm ſo effectually as ſtrong ones, and thence reſults a conſtant balance againſt him, when compared with a farmer able to take a larger tract of land. The keeping only two horſes, entirely debars all purchaſing of manures (unleſs they are of ſo expenſive a nature as to be of very little bulk, and ſuch are ſcarce ever bought by any but rich farmers) which are of vaſt conſequence to thoſe lands ſituated within reach of towns. It is ſurpriſing what great benefit coal-aſhes and mortar rubbiſh are of to ſtiff lands —be-

—beſides the great quantities of horſe, hog, and cow dung that are to be procured in that manner.

All the reſt of ſuch a little farmer's tackle are weak and inſufficient for the due culture of his fields; and it may eaſily be conceived in idea, as well as verified by experience, that there is a conſtant loſs owing to ſuch deficiency of ſtrength in the cattle and implements: this loſs leaves the farmer the leſs able (in *his* opinion) to reſt his lands at proper periods for fallow years—or to be content with ſowing crops by way of fallow, which do not draw much nouriſhment from the ground; as theſe crops are not of ſuch ready ſale as corn, but generally require cattle to be bought to eat them off. Theſe little farmers are equally deficient in keeping their fences in ſtrong and impenetrable order; deepening their ditches, and hollow draining their wet fields—all points of no inconſiderable importance. Laſtly, as the general conſequence of all I have advanced, I muſt add, that from the moſt attentive obſervation, I have great

great reaſon to believe that the crops raiſed by theſe little farmers are ſcarce ever equal to thoſe of their more ſubſtantial neighbours. It is therefore very clear, from theſe circumſtances, that the quantity and value of the produce of little farms is the leſs, on account of their being ſo ſmall ; and of courſe the occupier and public both ſuffer.

As to the next diviſion of farms ; thoſe which are cultivated with two ploughs and four horſes ; a very great part of the objections to the firſt, are in theſe removed. If there is a ſufficient quantity of graſs-land in the farm, and the farmer's ſtock in general equals his *number* of horſes, we may ſuppoſe the four are four ſtout ones, fully anſwerable to their work : in this caſe, the buſineſs of ploughing and harrowing may be duly performed, and four horſes are ſufficient for the purchaſing manures on turnpike-roads ; but this circumſtance does not extend to other roads. Four horſes will likewiſe do for employing two tumbrils at carting clay, chalk-earth, or other ſoil mixed in compoſt dung-

dung-hills, to advantage; which work (if ever done) goes off very ſlowly with the little farmer. In the next place, the rents of thoſe farms which require four horſes are ſeldom ſo high as the other, and the farmer is neceſſarily a richer man, and conſequently more able to improve his land by the purchaſing ſome manures, and raiſing more from cattle properly kept at home.

It is very clear therefore that the land occupied by a tenant who keeps four horſes, muſt be much better cultivated than when farmed by the man who keeps but two; or in other words, the quantity and value of produce will be infinitely greater, both to the cultivator and the public.

The next ſcale of farms I rank under the title of *large ones*, viz. thoſe which are tilled by from ſix to a dozen horſes, or nearly thoſe numbers. It is only men of conſiderable ſubſtance that can maſter *in a proper manner* theſe farms. I ſhall only obſerve in general, that theſe men are yet more able than the latter claſs to put all the ſprings of a per-

a perfect culture in motion. The article of purchaſing manures is (on turnpike-roads) within the power of four horſes, but the farmers who keep only that number ſcarce ever do it. It is the claſs now before me, who improve their fields in that manner, and in any ſituation as to roads, unleſs they are ſo extremely bad, as to render the work too expenſive to anſwer. All kinds of huſbandry improvements are executed with ſpirit by theſe men: advantage is taken by them of all occaſional and accidental manures:——They drain all their wet lands — keep their fences in admirable repair—plough and harrow their lands thoroughly:—And above all, are rich enough at any time, to purchaſe a ſufficient ſtock of cattle for conſuming all fodder, turnips, &c. on the premiſſes, and thus are never induced to paſs by the *fallow crop*, becauſe unable to command the ſtock neceſſary to eat it off. Theſe are generally turnips and clover; and there is a great difference between ſelling the turnips and letting them be carried off the

the farm ; or feeding ſheep or black cattle with them on the paſture fields ; —and between making hay of the clover and feeding cattle with it in the winter ; or feeding it.

In theſe, and every other inſtance that can be named, this claſs has the advantage over the laſt, and of courſe infinitely over the firſt. The neceſſary conſequence is, that the quantity and value of the produce of the land in their occupation, exceeds, both to themſelves and the public, the quantity and value of that in leſs farms.

The fourth claſs conſiſts of thoſe farms which require, and are cultivated with a larger number of horſes ; from twelve to twenty, thirty, forty, fifty, and even to an hundred. I ſhall not detain the reader with dwelling on many particulars relative to theſe very large farms : I ſhall only obſerve, that there may be many, which, as I remarked at firſt, are ſituated on an extreme poor ſoil, with a large ſheep-walk belonging to them, which cannot be occupied on any ſmall, or even middling ſcale : but

theſe I mentioned before as exceptions, and mean the repetition now as ſuch. In rich ſoils, or in ſuch as let for ſeven ſhillings an acre and upwards, I am clearly of opinion the farmer who keeps from ſix to twelve horſes, *may* cultivate his land as well, with as much profit to himſelf and the public, as the occupier who keeps any larger number— and much better than thoſe who cultivate *exceſſive* large farms; becauſe the farmer then has more ground and buſineſs than he can *properly* overſee.

The conſequences to be drawn therefore, from this review of the ſeveral claſſes of farms, with reſpect to quantity and value of produce to the farmer and the public, are as follows, viz. In the *firſt* claſs, the produce is the moſt inconſiderable of any. In the *ſecond*, it is much ſuperior to that in the firſt, but not equal to what the land is capable of. In the *third*, the farm is perfectly cultivated, and yields as great and valuable a produce, as it can do in any. In the *fourth*, it does not yield more conſiderably than in the third —

and

and when the ſize of theſe riſe towards the height, their produce is not *ſo* great as in the third claſs. ——I ſhould come now to the laſt claſs, of *grazing farms*, but here I omit to ſpeak of them by themſelves.

But I muſt here caution the reader not to conclude, when I ſay *ſuch a farm yields ſo and ſo*, that farms ſo circumſtanced always do yield in that manner: I only mean that the *generality* of ſuch farms produce as I have ſaid: but vaſt numbers of circumſtances may cauſe exceptions to be made in every rule; and particularly the lands being occupied by injudicious, or ſlovenly tenants. It is impoſſible ever to advance any maxim in ſo comprehenſive a ſtile as to exclude all exceptions: candid readers will take a general idea of each claſs, without deſcending into circumſtances which cauſe exceptions with intention to overturn the claſſes themſelves: I ſhall by and by examine ſome particulars myſelf which have a near connection with theſe exceptions.

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The ſecond head, under which farms in general are to be conſidered, is, *the number of people employed in them.* And in conſidering this point, I ſhall preſerve the ſame diviſion of them into claſſes as before.

The firſt claſs of farms, thoſe which are cultivated with one plough, are generally managed by the farmer alone: if any additional help is called in, it never conſiſts of more than a labourer, now and then at a *great pinch*, as they call it, ſuch as thraſhing out their little all of corn the moment it is in the barn: but ſome of them hire a lad for a yearly ſervant, if their farm is not of the loweſt quantity of land which two horſes can cultivate; in this caſe they never hire any labourer. From the minuteſt obſervation I can make, this is nearly the number of hands employed by the farmers of the firſt claſs.

Thoſe of the ſecond univerſally (unleſs they are *remarkable* hard working men

men themſelves, or have ſons men grown) keep a man-ſervant, who has the *care* of the horſes, and ploughs with a pair of them; beſides this man, they *in general* keep one labourer regularly, to plough with the other pair, and many of them a boy-ſervant for attending the cattle, harrowing, and other ſlight works of a farm. At harveſt, or the beginning of the thraſhing ſeaſon, they may hire a labourer extraordinary.

Thus ſuppoſing twenty acres of land the farm which employs two horſes (I am only forming a ſuppoſition at preſent, as I ſhall ſpeak of the quantity more particularly by and by) and forty for four horſes; in this caſe, the firſt maintains the farmer, a ſervant boy, and accidentally a labourer for a very ſhort time. The ſecond, the farmer, a ſervant, a labourer, and generally a ſerving boy beſides, with an additional labourer at buſy times: Thus the four-horſe farm employs moſt hands; in a good meaſure owing to the farmer be-

ing rich enough not to depend on himſelf totally for one plough.

The third claſs, thoſe from ſix horſes to twelve, varies greatly in the number of hands it employs; for many farmers in this claſs are rich enough to perfect improvements of ſundry kinds, above the purſes of the two former claſſes: and in ſo doing employ a great number of people. The ſpirit with which theſe farmers carry on their buſineſs, all promotes the employment of labourers —indeed chiefly conſiſts in it—and it is further to be conſidered, that the ſtanding workmen of their farms (or ſervants) are, one to every plough they keep *. Beſides, the men employed in carting clay, chalk earth, &c. for the improvement of the land, muſt greatly exceed thoſe employed in leſs

* It ſhould be obſerved, that by a plough is meant, the man neceſſary to one that works with one pair of horſes a day, eight hours; if a change of horſes and men is uſed, as ſome farmers practiſe, ſo as to keep the plough going in ſummer ſixteen hours, the caſe is different, though the ſame as to horſes and men.

farms:

farms : and in harveſt, a large farmer always allots one man to every twenty acres of corn of whatever ſort, ſuppoſing a common mixture of winter and ſpring corn. From theſe ſeveral circumſtances, I am inclined to believe, that a given number of acres portioned into farms of this claſs, maintains more hands in general than either of the two former.

As to the fourth claſs, I am very much in doubt concerning it. When I before ſpoke of it, I mentioned the difficulty of one farmer's overſeeing and properly managing ſo large an extent of ground as *ſome* occupy who are ranked in this claſs. Now ſuch difficulty ever introduces ſome confuſion, and a confuſed management of a farm as conſtantly tends to the ruinous practice of ſuffering ſeveral hands in an irregular manner to perform what might be done by one. I never failed on ſuch occaſions to make this remark. Now whether this circumſtance anſwers in point of the number of people employed, to others which may be brought on the other ſide of the queſtion, I am a

little in doubt: the chief of theſe is the different *farmers* which might be fixed in the tract of land which one occupies; for as to the number of labourers or ſervants, I cannot help reckoning them nearly the ſame. However, another point ſhould not be forgot; which is, that the *probability* of high improvements which employ great numbers of hands, lies moſt in favour of the moſt ſubſtantial man, or in other words, the greateſt farmer. Nevertheleſs I own my private opinion tends towards the third claſs in this reſpect of population; but not without doubts, which I take all poſſible care of removing.

Thus. in regard to the number of people employed on the land, whether it be divided into farms of the firſt, ſecond, third, or fourth claſſes; the following concluſions are to be drawn from the foregoing remarks, viz. That the ſecond claſs employs more hands than the firſt— the third, than the ſecond—and *it is imagined*, the fourth may employ ſomething more than the third; but then it is ſuppoſed more than

to

to loſe ſuch ſuperiority in having only one *farmer* on a large tract of land, inſtead of ſeveral. Or in one word, the third claſs is moſt advantageous to population.

* * *

The third head under which I obſerved farms in general ſhould be ranked, is *the value to the ſtate of the hands employed by them.* And here I muſt apprehend that the little farmer and the day labourer are to be conſidered in the ſame degree of public utility; if we are to conſider their value to the public in proportion to their ſubſtance; but this will admit of ſome doubt. However, as to the firſt claſs of farms, in whatever manner ſuch a caſe is determined, ſtill the little farmer and the day labourer are in general upon a par. From all the obſervations I have made, I am convinced that a day labourer, that is on an equality with the farmer in reſpect of children, is as well fed, as well cloathed, and as well lodged as he

would be, was he fixed in one of these little farms; with this difference—that he does not work near so hard. Indeed I regard these small occupiers as a set of very miserable men. They fare extremely hard —— work without intermission like a horse— and practise every lesson of diligence and frugality, without being able to soften their present lot——all the comfort they have, which the labourer does not possess, lies in the hope of increasing their little stock enough to take a larger farm; but this is not effected so often as many people may imagine.

Now if the value of people to the state, depends in any measure on their well-being or labour, I see no reason to rank the little farmer above the day labourer: and the circumstance of having a family belongs equally to both.

There is one point which is even unfavourable to them, that of not answering the calls of the government, when men for the public service are much wanted. In such times many labourers enter voluntarily into the service;

vice ; but no little farmers. Now this circumſtance may, or may not, be of any conſequence ; but the fact is true. Indeed it would be attended with a good conſequence, if, in ſuch a caſe, all the men wanted, were taken from among the manufacturers, on account of the number of little farmers leſſening that of labourers.

In ſhort, we muſt conclude, that in reſpect of population, comfortable living, and labour, there is no difference to the ſtate between a little farmer and a day labourer.

As to the farms of the ſecond claſs ; their occupiers are far happier in their circumſtances, and of more real ſubſtance than thoſe of the firſt. Theſe men I conſider as very valuable to the ſtate ; as the beſt nurſery of occupiers for the third claſs ; and as being removed from the very drudgery of their buſineſs, are enabled to *pay and maintain* ſome of that valuable ſet of men to the ſtate, the day labourers ; thoſe hardy, robuſt people who are ſo able to bear

bear great fatigues. Theſe farmers, and their warm, comfortable families, are of great conſequence to the well being of agriculture itſelf, if *conſidered* as the firſt ſtep to perfect cultivation: the man poſſeſſed of wealth enough to ſtock a farm of this claſs, ſets out advantageouſly to himſelf and the community: in one of theſe farms, he may, in a term of years, ſave money enough to advance into the third claſs; whereas if there was nothing but farms of that rank, it would be a matter of too much difficulty among country people to get at them. The little farmer is always conſidered as the chief tiller of his land, and therefore his *farm* does not properly ſpeaking maintain him, but his *labour*: now the ſet of men I am at preſent ſpeaking of, are in a good degree independent of *hard* labour, and may therefore be reckoned as maintained by their farms, beſides finding employment to day labourers. Conſequently, in reſpect to the value of the hands employed by this claſs of farms,

I muſt

I muſt conclude, that they are not only more numerous than the firſt claſs, but more valuable.

The third claſs of farms, viz. thoſe which require from ſix to twelve horſes to cultivate them, has hitherto appeared the moſt beneficial, both to the farmer and the public. In reſpect to the *value* of the hands employed, I muſt obſerve that theſe farmers themſelves are men of the greateſt conſequence to the nation; of more than any I have mentioned yet; for it muſt be very evident that great public benefit muſt reſult from the care, attention, and ſpirit with which theſe men expend conſiderable ſums of money, in the moſt advantageous manner poſſible to the nation. They are alſo highly valuable in forming a deſirable claſs of people between the two firſt ſets of farmers, and the men of ſmall eſtates and others who cultivate ſmall farms of their own. It is likewiſe to this ſet of cultivators, that a ſteady and beneficial employment of the poor is moſt owing. The other hands employed by theſe men are

chiefly day labourers; I have already ſpoke of their value, which is great; now this claſs employ more of them in proportion than the former, as every farmer with four horſes hires one man-ſervant (always ſingle) and others who keep ten or twelve horſes have but two; ſome I have known with only one and a boy, the chief of all their work lying on their labourers; which practice they find more convenient in countries where cottages are tolerably plentiful. Now the employment of labourers, who are generally married men, is more advantageous than houſe ſervants, who are always ſingle. From theſe conſiderations I am clearly of opinion, that the hands employed by this claſs of farms are of greater value to the ſtate than thoſe employed by the former.

The next claſs, or very large farms, I have no reaſon to ſuppoſe ſo beneficial to the public, in the point we are now conſidering, as the laſt treated of. For thoſe circumſtances which raiſe the latter above the ſecond claſs, do not riſe in proportion to theſe; as the third

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ſet are of ſubſtance ſufficient for a perfect cultivation. Now, theſe extreme large farms are oftener ſituated on a poor ſoil than a rich one, and conſequently cottages are ſcarcer and further removed from the farm-houſes; the farmer therefore neceſſarily depends chiefly on *hired ſervants*, of which he keeps a number ſufficient for working all his ploughs. This is a great prejudice to population, (and which did not immediately ariſe in the ſubject before.) In the next place, ſome of theſe very large tracts of land would admit of being divided into ſeveral farms of the third claſs, which I think I have proved to be the moſt beneficial in every light; by which means the population *might* be encreaſed; but the value of population certainly would, in the additional farmers and their families. This is ſo extremely clear, that it will not admit of a doubt.

I therefore, under this head, *of the value to the ſtate of the people employed by the ſeveral claſſes of farms*, draw the following concluſions, viz. That the *firſt* claſs

claſs is the leaſt valuable in this reſpect of any ; that the *ſecond* is of great value, but much inferior to the *third*, which is ſuperior to the fourth, and conſequently the moſt beneficial in this reſpect to the ſtate.

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My fourth general diviſion of the ſubject is, *the different advantage to the landlord* of theſe ſeveral claſſes of farms. Or if the caſe is put in other words, I might ſay, Whether it is moſt advantageous to a landlord to portion out an eſtate into ſmall, middling, or large farms, in the proportions I have ſtated in the claſſes ? And whether any particular claſs is of ſuch ſuperior advantage as to induce a landlord to alter an old arrangement on that account ?

As to the firſt claſs, that of little farms, there are two circumſtances to be conſidered ; the largeneſs of rent, in their favour ; and the repairs of buildings, againſt them. Much has been ſaid concerning the breaking of te-

tenants; but from the moſt attentive obſervation I have made, and the beſt intelligence I could gain, I have reaſon to believe this matter nearly on a balance between different fized farms; if a large farmer fails, the landlord it is true loſes moſt; but then for one large farmer in ſuch a circumſtance there will be many ſmall ones—ſuppoſing, I mean, that both are choſen with the ſame care by the landlord.

The greatneſs of rent which a little farm bears is, beyond all doubt, an object of no trifling conſideration: and as one can only ſpeak, in this reſpect, of things as they are, and not as they might be, were ſmall farms more common; it may be found in value more than equal to the difference of repairs, when the buildings are properly contrived.

In countries where the generality of land in middling and large farms lets at, from twelve to fourteen ſhillings an acre, I have obſerved that theſe little farms carry twenty ſhillings— a guinea ---and ſometimes more, an acre. How-

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ever, a *great* ſuperiority of rent is always to be obſerved. Now what a vaſt increaſe this is, muſt be apparent to every one —— indeed a much greater advance, than can be made by any other means whatever.

The account between this advance and the expence of repairs in *ſome* farms may I believe be equal; but this muſt ever be owing to a ridiculous quantity of building: I have often ſeen enough barn room, &c. and a houſe large enough for an hundred a year, on a farm of not twenty. It may therefore be eſtabliſhed as a maxim, that the gain by rent is often loſt in repairs in theſe very ſmall farms.

But on the other hand, I muſt obſerve, that vaſt numbers of theſe little farms, which carry a vaſt advance of rent beyond the *medium* of the neighbourhood, have no buildings that can in the repairs balance that advantage. I have ſeen many of theſe, with an exceeding ſmall houſe, which might be built new for forty pounds—a very little barn containing a threſhing floor, and

a ſmall

a ſmall bay for receiving the corn which is immediately to be thraſhed; and a ſtack floor for the produce in general. At one end a ſtable for two horſes, and at the other a houſe for two cows: the whole building ſo exceeding ſmall, that is, ſo proportioned to the land, that one ſixth part of the annual advance of rent is ſufficient to keep it in repair. Therefore, when landlords act thus rationally in regard to the buildings, I am fully perſuaded (as little farms are ſo ſcarce) that their profit from them would be greater than from large ones. It requires ſo ſmall a ſum of money to raiſe the buildings complete for a farm of twenty pounds per annum; that I am of opinion, where land lets for ten or twelve ſhillings an acre, the advance on parcelling it out into little farms, would more than pay the intereſt of the ſums expended at firſt on buildings—pay the repairs—and leave a ſurplus at laſt for the landlord.—— But the very contrary of all this is the caſe when ſuch ſmall farms have more buildings than are ne-

ceſſary.— Theſe circumſtances conſidered, I am much ſurprized at the practice of throwing little farms to great ones, unleſs the occupiers of the laſt agree, through a greedy deſire of more land, to pay the ſame rent for them as the little farmers did. In that caſe there can be no doubt; but I ſhould apprehend it would ſcarce ever happen.

The ſecond claſs, thoſe which are cultivated with four horſes, ſeldom let at ſo high a rent as the firſt. But tenants being very readily to be had for them, I believe they generally pay more per acre than for larger farms. What I obſerved in the laſt article concerning the buildings, is in a good meaſure applicable to theſe: the profit of them, compared with larger or ſmaller farms, depends in a good meaſure on the repairs —— if there are no more buildings than neceſſary, I apprehend this claſs to yield more profit to a landlord than any larger farms.

The third and fourth claſſes, conſiſting of large farms, and *very large* ones, are by no means let with that quick fa-

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cility of the former ones : there are not near ſo many men whoſe pockets they ſuit, and this neceſſarily occaſions the land thus divided not to let ſo well, as when in ſmaller portions. But then, there is another circumſtance to be conſidered, which regards improvement ; if a landlord's eſtate requires it, theſe are the men alone who can effect that —the former claſſes are quite incapable of it : and that is more particularly the caſe with extenſive farms on a poor ſoil which requires marling, claying, chalking, or any other expenſive and laſting improvement. In theſe caſes, the large farms are undoubtedly the moſt profitable. But if the land of an eſtate is already at its higheſt degree of goodneſs, or nearly ſo, then ſmall farms anſwer in the manner I before obſerved.

Having thus gone through my four general heads of treating farms of every ſize, and given my ſentiments concerning them, I hope to the ſatisfaction of the reader ; I ſhall now ſpeak of grazing farms, which, as they vary

pretty much, in moſt particulars, from other farms, are beſt ranked by themſelves. I ſhall conſider them under the four heads of compariſon I have already uſed.

Firſt, *The quantity of the produce, and the value of it to the farmer and the public.* And here, the moſt ſenſible author of the *Eſſays on Huſbandry* furniſhes me with a maxim which I adopt on his authority—— namely, That *in any country where there is full conſumption at home, or commerce for exportation, the beſt uſe the land can be put to, is to cultivate* THAT *crop, whatever it be, which produces the greateſt profit* VALUED IN MONEY *.

Let us therefore compare the difference between the *profit valued in money* of graſs farms, or common arable ones, with a portion of paſture belonging to them. — And I ſhall begin with little farms ; not that I deſign to proceed regularly, as before, according to their ſize, but there are ſome ſtriking obſervations to be made on *theſe* particularly.

* Page 38.

I be-

I before remarked, that the little farmer works harder, and is to all intents and purpoſes as low in the comforts of life, as the day-labourer. But this wretchedneſs is totally owing to his occupying arable inſtead of graſs land. The plough moves at a vaſt expence in wear and tear, keeping of horſes, and labour: an expence far beyond the ability of men whoſe ſubſtance is ſo ſmall; and requires a greater vigour in the culture than they can poſſibly give. Beſides, the *uncertainty* of arable crops is very great, which is a terrible affair to the little farmer, who has not a variety of crops and cattle, that if one thing fails, another may make amends. Now all theſe circumſtances are totally changed with graſs farms. They are managed at a ſmall expence — there is ſcarce any wear and tear—the certainty of the produce is infinitely beyond that of arable land— and in fine, one horſe is ſufficient to the very little farmer—and with the greater farmer one horſe to graſs land is equal to four for arable.

The difference between the man who occupies twenty acres of grafs land, and him who rents fuch a farm, as that quantity generally is, the greateft part arable— is immenfe : the one is for ever toiling and labouring exceffive hard for a fcanty pittance, with conftant poverty ; the other lives at his eafe in plenty, and grows comparatively fpeaking rich, befides.

The fum of money at firft neceffary to ftock the arable land farm and pay the expences of the firft year, would be fully fufficient to ftock the grafs one with a dairy of cows, and a few hogs : —— or if there was no wife, with heifers or bullocks for grazing —— or fed off partly by fuch cattle, and partly by fome fatting fheep. A farm thus managed would require fcarce any thing in wear and tear—the farmer himfelf would be highly fufficient to perform *all* the labour of it, with eafe and pleafure. He would find a far greater certainty of profit, than in the common method ; and in cafe a bad year came, he would not, when his return came in, have to pay half of it to

his blackſmith, wheelwright, and an infinite variety of demands which the plough cauſes.

This doctrine, I am well aware, will meet with great oppoſition from the warm advocates for arable land: there are many ſuch, who will never allow that grazing is equally profitable. The practical experienced man, however, I am very clear will be of my opinion. I could inſert twenty accounts of the produce and expences of both, but I am fearful of being tedious: from the moſt accurate that can be made, the graſs land is found to be infinitely the moſt profitable. The common anſwer to this argument is the urging the univerſal practice of common farmers to break up whatever graſs fields their landlords will permit: but this is no proof that arable land is moſt profitable ——it proves only that there is a great profit on the *firſt breaking up* of graſs lands; and this it is which induces them to plough freſh land, to a certain loſs in ten or a dozen years ---though profit for a ſhort time. Well therefore

might M. *Raffineſque* ſay — "Si l'on entre dans quelque détail ſur ce ſujet, on ſe convaincre bientôt qu'une trop grande quantité de terres labourées, relativement à nos prairies, *eſt une des prémières ſources de la pauvreté* du peuple de certaines contrées *." — I conclude therefore, that it is infinitely more profitable to a little farmer to occupy an entire farm of graſs, than have any thing to do with the plough.

The ſame aſſertion may likewiſe be ventured in regard to thoſe who uſually employ four or more horſes. The ſame ſum neceſſary to ſtock one of their farms, would be highly ſufficient for a grazing one; for two horſes are the utmoſt they need keep in ſuch a caſe; and inſtead of the heavy expence of a man and boy ſervant and labourers, one boy would be ſufficient--with a dairy-maid, if cows was the object —— and if fatting cattle, the farmer himſelf without any aſſiſtance. Think what a vaſt ſaving of expence is here!

* Mémoires de Berne Société 1763, premiere part. p. 3.

In very large farms I do not apprehend it is ſo profitable to have nothing but graſs. A ſmall portion of ploughed ground to grow turnips, carrots, and oats on, in a courſe of huſbandry to have a crop of each every year, would be more advantageous, as by this means the feeding of cattle might be continued the whole year through, thus dividing the buſineſs and having winter employment for the few hands neceſſary, if a dairy was not the object, but if it was, more are neceſſary — and alſo growing the oats neceſſary for four horſes, which is the utmoſt number that can be required, for I may ſay the *largeſt* of grazing farms: only excepting thoſe which are turned to the dairy buſineſs in a country where the roads are very bad, as ſuch a number would not then be ſufficient to carry full loads of cheeſe and firkins of butter.

It is therefore extremely apparent, that in all ſoils rich enough to bear good graſs, ſuch farms are far more profitable than arable ones, let the quantity of land be what it may: or

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in other words, the *value* of the earth's productions (all expences paid) is much greater in grafs farms than arable ones; unleſs they are ſituated on a poor ſoil.

The ſecond head, under which I am to conſider grazing farms, is *the number of people employed.* In this reſpect the caſe is determined in an inſtant: it is tillage which maintains great numbers of men: indeed the vaſtly ſuperior profits of grafs land, are in a good meaſure owing to the few hands required to manage it. Moſt authors have been ſenſible of this; "Les païs, ſays *Monteſquieu*, de pâturages ſont peu peuples. Les terres à bled occupent plus d'hommes, & les vignobles infiniment d'avantage. En Angleterre on s'eſt ſouvent plaint que l'augmentation des pâturages diminuoit les habitans *."—But he ſoon after obſerves--"Enfin la terre qui eſt employée ailleurs a la nourriture des animaux, y ſert immédiatement à la ſubſiſtance des hommes; le travail que font ailleurs les animaux eſt fait là par

* De L'Eſprit des Loix, tome ii. p. 120. Liv. 23. chap. 14.

les

les hommes, & la culture des terres devient pour les hommes une immenſe manufacture."—I ſhall not take up the reader's time with dwelling on a point, the certainty of which is ſo extremely evident; viz. that graſs farms, of whatever ſize, are greatly inferior to arable ones in the employment of people.

As to the third head, concerning the different value of theſe hands to the ſtate, it is nearly the ſame in both arable and paſture farms; the difference only conſiſts in the number.

Fourthly, in reſpect to the different value to the landlord: that is certainly moſt advantageous to him which yields the beſt rent, with the greateſt probability of continuance. Now, whether he portions out his eſtate into ſmall, middling, or large farms, the graſs ones will, beyond all doubt, bring him moſt rent, and that in no trifling degree of ſuperiority. I think I have proved ſufficiently clear, that they are by far the moſt profitable to the tenant; it is therefore highly reaſonable that they ſhould be the ſame to the landlord. In

fact,

fact, graſs land ever lets better than arable, unleſs it be immediately on the breaking up, which is an exception to any general courſe of farming. The beſt graſs always letts for more money than the very beſt arable. Another circumſtance of no mean importance, is the article of buildings : graſs farms require few or none beſides the dwelling houſe ; and this ſaving in repairs is prodigious—that very article being ſufficient, as I before obſerved, in ſmall farms, to balance ſix or eight ſhillings an acre rent, as buildings are commonly managed. It is further to be remembered, that a bad tenant cannot ruin a graſs farm by continued cropping, or very bad huſbandry in other particulars, as is too often the caſe in arable ones, under negligent or ignorant landlords—or thoſe who reſide at a great diſtance from their eſtates. It may be ſaid, that tenants are in general bound by their leaſes from ſuch practices ; but common obſervation may convince us, that leaſes are far from being ſufficient to prevent ſuch evils

when the ſoil has the misfortune to be cultivated by ſlothful or ravenous occupiers. But ſuppoſing a tenant acts according to his leaſe, no leaſes bind them in ſuch a manner as to be ſure of preſerving the arable farms in as good condition as they muſt the graſs ones: for although there is a vaſt difference between the good and ill management of the latter, yet it is far from equal to the former; and we ſhould conſider that tenants will ever be ready enough to break up graſs land after any farmer to their profit— but none can be found that will lay down arable to graſs after a ſlovenly one— for land that is exhauſted by croſs cropping, and ſlovenly management, will be a long time before it yields a good turf.

The advantages attending paſture-farms, to a landlord, are indeed ſo ſuperior, that I know of no rural improvement greater, than when leaſes are out, to get the arable lands into fine order, to lay them down in good heart to graſs, and then to re-let the ſame farms.

The

The riſe of rent will be very conſiderable; far more than ſufficient to pay all the expences. And in this new ſtate the fields will remain permanently good, and not be liable to have their very heart *cropped* out again.

In fine, from every conſideration which occurs, there is the greateſt reaſon to advance as an undoubted fact, *That graſs farms, of whatever ſize, are by far the moſt advantageous to landlords.**

By way of concluſion to theſe remarks, I ſhall draw ſome corollaries from them, which will ſet the ſubject in a clear light.

FIRST, That ſmall farms are detrimental to the occupier and public in the ſmallneſs of their produce; rather injurious than otherwiſe to population; and very deficient in valuable hands: but of ſuperior advantage to landlords when incumbered with only the neceſſary buildings.

* I before mentioned, *on a rich ſoil.* As to ſheep-walks, the caſe is different, which point I think I ſufficiently explained in my parallel between ſuch tracts of land in their common and improved ſtate.

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SECONDLY, That middling farms yield a ſuperior (proportional) produce to the ſmall ones— maintain more people, and of a more public value; likewiſe are more advantageous to landlords than any larger farms.

THIRDLY, That large farms in reſpect of produce are more beneficial than any — more advantageous than any to population, in number and the value of hands; but not of equal profit to landlords with ſmall and middling farms, unleſs ſituated on a poor ſoil.

FOURTHLY, That very large farms do not in general produce equal to the laſt claſs —— nor maintain of hands an equality either in number or value; nor are they of ſo great advantage to landlords as the firſt and ſecond claſſes, unleſs ſituated on a poor ſoil.

FIFTHLY, That graſs farms are in reſpect of produce by far more beneficial than arable ones; infinitely leſs advantageous to population,

lation, in point of number of people, but equal in reſpect of their value. And laſtly, by far the moſt beneficial to landlords. — Poor ſoils in every article excepted.

I flatter myſelf that theſe maxims, if they have not that perfect accuracy I could wiſh, will at leaſt pave the way for more fortunate enquirers to give the public a more determinate knowledge of this important ſubject than is common at preſent. And now, having ſtated the different public and private value of the ſeveral kinds of farms, as nearly as I am able; I ſhall proceed to ſome general practices of agriculture common in every claſs, and aim at pointing out the means of advancing its preſent ſtate nearer to perfection. In treating of which points I ſhall naturally illuſtrate ſeveral paſſages of this letter, which to ſome may not be ſo clear as I could wiſh it was to all.*

* The reader, I hope, does not accuſe me of inadvertency in omitting *wood-farms*: they not being very common, and their properties relative to my four general heads apparent enough. Of timber I ſhall ſpeak anon.

LETTER IV.

IT is a matter of infinite conſequence to the nation, that every huſbandman in it ſhould cultivate his farm in a neat and maſterly manner; that no part of the ſoil may be exhauſted by noxious weeds, and prevented from yielding its full produce: or, in other words, that every farmer may be enabled by his profit to proceed in his buſineſs with ſpirit: for if he does not make a reaſonable profit by his buſineſs, the ſtate muſt ſuffer. It is therefore highly important that ſuch courſes of agriculture be recommended to them, and practiſed by thoſe few who have the true idea of experimental huſbandry, as will tend to advance the rural œconomy of this country to the higheſt pitch.

One of the chief points which tends to render huſbandry profitable to its profeſſors, is a due proportion between the arable and paſture lands of a farm.

Without this advantageous proportion, there cannot be that general benefit, which ariſes from a judicious *arrangement* of a farm. I have already proved the greatly ſuperior profit of a grazing one; and all the arguments which I *then* uſed, are of force *now*, in diſplaying the benefits of any quantity of paſture. It is a miſerable thing to have the farmer depend entirely on the plough for his all; eſpecially the little or middling ones. By having a proper quantity of graſs, his dependencies are divided—he is not ſo liable to be totally diſappointed in his crop—his immediate profit is much greater, and his conſequential benefit, great ſtill. For it is his paſtures which maintain cattle—and it is on cattle he depends for a ſufficient quantity of manures. But when all, or nearly all the land of a farm is arable, it is twenty to one but the ſoil is quite exhauſted in a term of years, unleſs the management is very maſterly, and the *purchaſed* manures, conſiderable.

From

From the beſt obſervations I have been able to make, I have great reaſon to believe that half the lands of a farm, but more particularly of a ſmall or middling one, ought to be graſs. A multitude of advantages reſult from ſuch a diviſion; both arable and paſture then mutually aſſiſt each other in forming a great quantity of manures. The arable, in furniſhing turnips for the winter ſubſiſtance of the cattle, and ſtraw for them to make into manure; the graſs, in maintaining cattle in the ſummer ready for ſpending the arable produce of fodder, ſtraw, &c. And without this diviſion of a farm, the occupier muſt ſuffer. It ſhould be remembered that clover will not anſwer the purpoſes of natural graſs; for I know of no cattle that can be fed to advantage on it but horſes, ſheep, and hogs——neither cows nor neat cattle. But in this caſe, as before, I always except farms ſituated on a poor ſoil. Thoſe ſmall farms which have two thirds or three fourths of the land graſs, would be yet more profitable to the occupier

 ——but,

——but, as I before obſerved, not ſo advantageous to population.

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Another circumſtance, which depends on the farmer's management, and is of no ſmall conſequence, is the arranging his lands properly for his crops. It is common in ſome countries to ſow little beſides wheat; having nearly one half of the land under that crop, and the other half fallow, for the reception of the next year's. And in others, where this practice is varied, it differs chiefly in ſowing oats ſometimes — and in others, barley. However, the fewer the diviſions of the farm are, the leſs in general the profit.

It muſt be obvious that the fewer the diviſions of a farm into different crops, the more horſes muſt be kept for cultivating them; becauſe the buſineſs of ſowing comes too much together, and if a ſufficient ſtrength of ploughing cattle is not kept, the ſeaſon will paſs without the ſeed being in the ground; and

and the conſequence of that, is the land's being ſown at an improper time. Whereas if a diviſion of the farm is made into a variety of parts for different crops, the ſeaſons for ſowing them being different, the fewer horſes will do. For inſtance :

Suppoſe one hundred acres of arable land belonging to a farm, be divided into three portions of thirty-three acres each, one ſown with wheat, one with ſpring corn, and the other fallow; the horſes muſt neceſſarily at any ſowing time have that quantity of land to cultivate at a time : this is ſeldom done in common, with leſs than ſix horſes, or three ploughs, and often with four : and in tickliſh ſeaſons it will require that number. Let us now enquire what number will do if differently managed.

One hundred acres of arable land might be cultivated with one plough and a pair of ſtout horſes, by dividing them into eight portions : but as two horſes would be inſufficient for carrying out manures and other carting, not

leſs than four would be entirely proper; but that number would fully anſwer every purpoſe. The land ſhould be divided thus. 1. Beans 12½ acres, ſown in *February*. 2. Black oats the ſame quantity, the latter end of *February* and beginning of *March*. 3. Barley (the ſame) in *April*. 4. Turnips (the ſame) in *June* and *July*. 5. Wheat, in *September*. 6. Peaſe, in *October* and *November*. 7. A clover lay one year old. 8. Ditto, two years old. By means of ſuch huſbandry the land will always be kept clean and in heart, becauſe the crops which impoveriſh the earth, thoſe of wheat, barley and oats, are not out of proportion to the reſt.

I leave it to the reader to judge what a ſaving it is to the farmer, inſtead of ſix or eight horſes, to keep only four; and to fat four heifers or oxen, or keep four cows, in the room of the four uſeleſs horſes. That ſuch a ſaving would be very conſiderable, is apparent on the very firſt view of the affair: and I am well ſatisfied that the attentive obſerver in moſt countries will remark,

mark, as great a loſs as this I have ſtated in the article of uſeleſs horſes.

Horſes are kept at ſuch a great expence, that it is to be wondered at huſbandmen in general do not better ſee their own intereſt in that reſpect: for they ought always to be employed, or they can never pay for their food; and in the common manner of cropping a farm, they ſtand ſtill a great part of the year, for hurrying on the buſineſs of a few weeks at the ſowing times; which is management that tends to the great impoveriſhment of the farmer.

But he does not ſuffer only in the uſeleſs horſes he keeps, but in the haſte with which he ploughs and ſows his land—for having a great deal to do in a ſhort time, moſt of it muſt be incompletely done, notwithſtanding the number of his horſes; and in the articles of harrowing and rolling, he is very deficient; whereas if he was to vary his crops more, he would of courſe have more time for each, and all be conſequently better conducted. There is not a more pernicious piece of ill ma-

nagement in huſbandry, than by dilatorineſs or other means to be ſtraitened for want of time; the work is never well done—the land is ploughed wet—harrowing is omitted —— and the ſoil, inſtead of yielding a beneficial crop, is filled with trumpery and weeds for years to come. Whenever a farmer is in ſuch a ſituation, he had infinitely better let alone ſowing the field, though it be for a year—but this is a doctrine they will not a moment hear of.

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Horſes are ſo extremely expenſive in the food they require — in the expence and wear of their harneſs— in their ſhoeing—and above all, in their variety of diſorders, lameneſſes, and deaths they are ſubject to, that I think it is of vaſt conſequence both to the farmer and the public to extend the uſe of oxen for all ruſtic buſineſs.

Oxen are kept infinitely cheaper than horſes. Their harneſs and ſhoeing coſts leſs—they are not near ſo ſubject to illneſs

illneſs and being lame—and if lameneſs does overtake them, or they grow too old for work, they then remain fit and ready for fatting. Their ſummer food, like that of horſes, conſiſts of graſs, but without any hay or oats: in winter good ſtraw and turnips, or carrots; if no roots, then hay alone. In reſpect to attendance, the difference between horſes and oxen is likewiſe very great; one ſtout lad is ſufficient in a convenient ox-houſe to take care of eight or ten, they requiring no other attendance than putting down their fodder in their racks, and cleaning the houſe out; no rubbing or currying or dreſſing, which with horſes takes a man to every four or five at moſt.

The harneſs of oxen, that is, their yokes, bows, and chains, coſts leſs by two thirds than the harneſs of horſes, and what is as material, require ſcarce any repairs; whereas the horſe harneſs, every practical huſbandman knows, is a conſtant rent-charge, every part of it is continually coming in pieces, and not mended under a great expence. The

ſhoe-

ſhoeing is equally in favour of the oxen, not coſting ſo much as that of horſes, and laſting longer.

The circumſtance of fatting them when paſt work, is of moſt material conſequence. It is well known how great a loſs to a farmer that keeps many horſes, their dying and becoming diſabled is. In a large buſineſs this, in a term of twenty years, becomes an object of infinite importance, and was it divided would make a conſiderable annual charge. Now with oxen this is totally different. If accidentally they get lame, to which however they are not ſo ſubject as horſes, or when they abate of their vigour at work, the farmer fats, and ſells them as well as the beſt — and no beaſts fat kindlier than worked ones.

It has been objected, that oxen are not proper for all work — and in the horſe counties there is quite an abhorrence againſt their uſe: it is there aſſerted that they are by no means equal to horſes. But I have myſelf found the contrary, as well from my own experience, as the information I have gained

from the beſt hands. A pair of ſtout oxen will plough as much as a pair of horſes, and unleſs the horſes be ſtrong and ſteady ones, carry a deeper and truer furrow. But when we read in *Liſle* of eight and ten oxen in a plough, it raiſes one's very indignation. Either the ploughs at that time in *Hampſhire* muſt be of a ridiculous conſtruction, or the ſoil rock itſelf. I have indeed been informed, that in many parts of *England* it is yet the practice to plough with a great many at a time: all I can anſwer to this, is, that I have experienced in ſeveral ſoils, that where a pair of ſtout horſes plough an acre a day, a yoke of oxen has always done the ſame.

They are preciſely as convenient and effectual in all other rural buſineſs: in the waggon, in carts, and tumbrills, in rolls, &c. &c. &c. and with as much eaſe and handineſs as any horſes.

One additional expence attending them it would however be unfair to ſuppreſs: a pair of horſes in a plough requires only the ploughman, but a yoke of oxen muſt have a boy to drive them. In

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the ox counties this expence amounts to a penny or three halfpence, I am told, per journey of eight hours: but where I have any knowledge could not be procured in the villages under twopence or threepence: but clear I am that this additional expence (when at plough) does by no means reduce them to a par with horſes.

Laſtly, the public is nearly concerned: for among the many cauſes that are daily mentioned to occaſion a high price of butchers meat; I have not heard the great numbers of horſes that are kept, aſſigned as one. I have reaſon to believe the number of them increaſes greatly in moſt parts of the kingdom: this is an immenſe loſs to the community, in the vaſt quantities of horſe-meat grown on land where more valuable corn for exportation might be cultivated, was the work in general performed by oxen; and not only ſo, but the oxen themſelves would be perpetually coming to the ſhambles, yielding thereby a great increaſe of butchers meat; but this is never the caſe with

horſes

horſes — their carcaſſes are conſigned only to the kennel.

In the table of the growth, &c. of corn, p. 45. the conſumption of oats amounts to upwards of four millions two hundred and fifty thouſand quarters, which is above two hundred thouſand quarters more than the growth of wheat. Think what an immenſe ſum is loſt to the nation in the vaſt quantity of land taken up to raiſe this grain. Much of it, I know, of a poor ſort not fit for wheat —but infinite tracts that are—and moſt of it proper for barley. I have already ſhowed that the nation has in fact profited by the annual exportation of rather more than four hundred and twenty thouſand quarters of corn of all ſorts, above the ſum of *one hundred and forty millions ſterling* in leſs than ſeventy years. Now compare this quantity of corn with our conſumption of oats, which amounts to more than ten times the quantity. Think but of doubling that immenſe ſum by only decreaſing the land ſown with oats (for ſeventy years) *one tenth*, and inſtead thereof, ſowing it with barley, rye, or

wheat,

wheat. But to talk of one tenth is abſurd ; why may we not, in the next ſeventy years, take a third from this monſtrous tract of I may ſay uſeleſs land ? What a mine of wealth would it produce, if cultivated to the purpoſes of exportation !

This immenſely important object of public welfare can only, in any degree, be effected by reducing the number of horſes uſed in huſbandry, and ſubſtituting oxen in their ſtead. The infinite variety of beneficial effects that would reſult from this alteration are manifeſt and ſtriking ; and if the reduction of the prices of proviſions is an object of earneſt attention, there is no method ſo ſure and eligible as encreaſing the number of working oxen. A very ſmall reduction of the number of horſes and uſing of oxen inſtead of them, (for inſtance, one tenth part) provided the land ſown with oats to maintain them, was ſown with wheat, rye, and barley for exportation, would not only give a great increaſe of butchers meat, but alſo yield at the loweſt, one million and a

half

half annually clear profit to the nation.

For we ſhould conſider, that a vaſt proportion of the land which bears this immenſe quantity of oats being rich, and able to produce wheat — a great deal of it proper for barley, and nearly the pooreſt of it ſufficiently good for rye; a proportion of it may certainly be deducted on paper without the imputation of arranging lands for exportable corn, not good enough to bear it. I am alſo ſenſible that it will be objected, to be impoſſible always inſtead of oats, to ſow wheat, even on wheat land, becauſe oats are frequently ſown after wheat. But then it ſhould be remembered that the farmer's keeping a number of horſes renders an oat crop abſolutely neceſſary: in determining the courſe of his fields, he fixes on a certain quantity of land for oats, which muſt be grown, or bought, a thing few farmers like: and if he be a good huſbandman, he will abhor the practice of ſowing ſo voracious a vegetable after wheat, but ſow them after a fallow or

ſome

ſome ameliorating crop; indeed oats, by a prudent neat farmer, are never ſown on land which would not produce either wheat, barley, or rye.

But ſuppoſing they were generally an after-crop; there is an infinite difference to the public, as well as the cultivator, between ſowing them or beans, or peaſe, or turnips, becauſe after a good crop of peas or beans, in rich lands, wheat is again ſown, and after turnips, barley. But when oats comes in between, the ſoil is thereby ſo impoveriſhed, that a fallow muſt enſue, before any exportable corn is again ſowed.

From all the reaſons that can be urged in any reſpect, to this point, of the difference between keeping horſes or oxen for the buſineſs of huſbandry, we have the greateſt reaſon to believe that many very important benefits would reſult to the private occupier, and alſo to the public. 1. The farmer would cultivate his land cheaper. 2. He would grow more exportable corn. 3. His fields would be much cleaner, and

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in better heart. 4. The price of butchers meat would be reduced to the publick. 5. An immenſe profit would likewiſe accrue to it in a prodigious increaſe of the exportation of corn.

I LET.

LETTER V.

THERE are ſome other very important enquiries to be made into the ſtate of agriculture, and many remarks to be made on it, which are of more conſequence to the well-being of this kingdom than are apparent on a ſuperficial view. But as the excellent *Society for the Encouragement of Arts, Manufactures, and Commerce*, have, in a liberal manner, offered premiums for promoting many valuable enquiries; I ſhall follow their order of treating of them, and make ſuch remarks as my *experience* of the ſubject will allow me. Thoſe for 1766, are as follow.

Lucerne.

The culture of this celebrated plant was very minutely attended to by the old *Romans*; but their ſacritions, runcations, and rigations, however they might anſwer in thoſe times, it is very

clear will not at preſent; and if it would at preſent in *Italy*, moſt certainly will not in *England*.

That lucerne is an object worthy of the *Engliſh* farmer's attention muſt be apparent, if we conſider the vaſt quantity of herbage a good crop yields, the nutritious quality of it, *as it is ſaid*, in fatting cattle, and the benefit it is of to the land. The methods of cultivation mentioned by the Society are *planting* and *ſowing*. The planting is in reference to the newly diſcovered method of cutting the tap-roots and tranſplanting: the ſowing is either in the broad-caſt mode, or by drilling. As a ſufficient number of experiments has not been publiſhed to prove which of theſe methods is moſt advantageous, the Society very judiciouſly leaves it to the cultivator's private judgment.

The only experiments of any authority which we have on lucerne are, *firſt*, Thoſe publiſhed in that admirable book the *Eſſays on Husbandry*: theſe are in the tranſplanting method; and as to all the points of culture, expence,

duration, *&c.* are highly ſatisfactory. *Secondly*, Mr. *Rocque*'s, in the broad-caſt method; but theſe, from many circumſtances, are not of ſatisfactory authority; for they are not regiſtered *as* experiments, but delivered to the reader in the ſtile of didactical inſtruction; the expences are not inſerted, nor is the duration by any means proved. *Thirdly*, The gentleman's that gained the medal (*Muſeum Ruſt.* vol. vi. p. 170.) no name nor place of abode; in the drilling method: but as it is only one experiment, and the expences not ſtated, this will by no means ſatisfy the leaſt inquiſitive enquirer.

As to all the tribe of experimenters, who are *nameleſs*, or who give us nothing but *directions*, not the leaſt credit is to be given to them. Mr. *Wynn Baker*'s trials are yet too inconſiderable to eſtabliſh any concluſions.

The penetrating author of the *Eſſays on Husbandry* (Mr. *Harte*, canon of *Windſor*) is by far the moſt ſatisfactory; and indeed the only authority, in any method, that a cautious culti-

vator

vator can be ſatisfied with. His experiments teach us, that tranſplanted lucerne is an object of infinite importance, and exceeds in profit moſt of the commonly cultivated vegetables. And as it anſwers, not only in point of private advantage, but alſo in public benefit, in reſpect of employing great numbers of hands; the culture ought highly to be encouraged, and variety of experiments to be promoted.

The drilling method likewiſe promiſes great advantages; but for want of ſatisfactory experiments, no abſolute certainty is to be gained. The broadcaſt mode *may be* of benefit on *ſome* ſoils; but that it will anſwer at a diſtance from *London*, in the mere quantity of cattle it maintains, is a problem yet; I queſtion much, whether (in this method) it equals clover. The land moſt undoubtedly is not improved by it like the tranſplantation and drilling.—Such being the extent of the public knowledge in this important point, it clearly proves the great utility of the Society's *deſign* in their premiums for

promoting experiments in it. But the offer is only twenty pounds for the greateſt quantity not leſs than *ten* acres. Gentlemen, I ſhould apprehend, would *rather* aim at an honorary premium; I ſuppoſe, therefore, this is meant for the farmers chiefly: now a *farmer* will never be tempted to try an experiment of a very doubtful event, the expences of which will not be repaid by the premium, *if he gains it.* But when he conſiders the actual expence; the loſs of a clover crop if the lucerne fails, and the chance that he may not gain the premium; when he conſiders theſe circumſtances, I muſt own I doubt much whether one farmer out of twenty thouſand will venture the attempt. A certain premium for every acre is the only thing which, I apprehend, will ever ſpread the culture.

Carrots.

I know of no part of the kingdom where the culture of this root has for ſome time been common, but in the neigh-

neighbourhood of *Woodbridge* in *Suffolk*. The farmers there (particularly in the angle of country between *Woodbridge* creek and the ſea coaſt) regularly cultivate a ſmall field of carrots, for the winter food of their horſes, and ſometimes to ſend by ſea to the *London* market. I took a journey into that country on purpoſe to obſerve their crops, and take ſome minutes of their method of cultivating them.

The ſoil is an exceeding light ſandy loam: I know not whether I ought not to call it an abſolute ſand: ſo deep and looſe that I eaſily, with a ſhovel, with ſcarce any force, made a hole a yard deep in a carrot field belonging to Mr. *Moore* of *Wantesden*, without finding any change of ſoil. It was in *October*, and the crop taking up: many of the carrots were as large as the body of a quart bottle, and of a great length, and very ſtraight: they had often twenty or four and twenty cart loads an acre (each forty buſhels:) they reckoned them a very good fallow for barley. The method of cultivating them was

to plough a very fleet furrow, with a pair of horſes; and then another plough, ſometimes with four horſes, followed, and cut as deep as they could, to the depth of eighteen or twenty inches, and then harrowed in the ſeed: all which operations they perform nearly about *Lady-Day*, with no previous ploughing of the ſtubble. They hoe them three times, at the price of ſix, five, and four ſhillings an acre: always dig them up, which is performed with great eaſe and expedition.

In ſuch a ſoil, and where the work is common, the hoeing is performed, we find, for fifteen ſhillings *per* acre: whereas in other parts of the kingdom workmen will not do the firſt hoeing under thirty ſhillings. I have myſelf cultivated them on a fine light turnep land loam, trench ploughed and hoed the firſt time at that expence; and the men made only eighteen-pence a day *per* man, although I thought they would earn half a crown. Now this vaſt expence of hoeing, and the ſucceeding one of taking up the crop, ren-

ders

ders their culture exceſſively expenſive in any country where it is not a common practice. I cannot but therefore conclude, that a certain premium *per* acre will be the only method of extending the culture of this uſeful plant.

Mr. *Billing*'s treatiſe on the ſubject contains the only experiments we have extant: very clear and ſatisfactory they are, and diſplay, in a moſt convincing manner, the importance of the object. Turneps will proſper well on land which will not bear carrots; but whenever the ſoil will admit them, their culture is by far more profitable than that of the turnep.

Parſnips,

What has been ſaid of carrots, is in a good meaſure applicable to this root. But I am very fully perſuaded that, unleſs it will thrive on a ſoil too ſtiff for the carrot, the culture will never anſwer: the latter is by far the moſt valuable vegetable; but many people, who have heard of the parſnip culture in *Brittany*,

tany, conclude too ſpeedily in favour of it in *England*: however, too much cannot be ſaid in return for the patriotic extenſion of the Society's views.

Parſley.

We have not one experiment of any authority on this plant: nothing therefore can be ſaid of its value; but the idea of its uſe for ſheep-feed, very rationally induced the Society to give a premium for its culture; and as the quantity which may gain the premium of twenty pounds is only four acres, there is more probability of its having ſome effect: but in every object, ſome certain offer for every acre is the way to advance the meaſure.

Burnet.

It is remarkable that a plant, diſcovered as food for cattle ſo lately, ſhould ſo ſoon get the ſtart of lucerne, which is beyond doubt (properly cultivated) a more valuable paſture. Dr.

Lambe's,

Lambe's, Mr. *Lewis*'s, and Mr. *Baldwin*'s, not to mention what Mr. *Rocque* has written on the ſubject, are very valuable experiments. Had lucerne been tried with as much ſpirit, and as often as the burnet has, the value of it would be better known. But we have no experiments on it on ſo large a ſcale as theſe on burnet.

However, this latter plant is certainly worthy of the attention the Society gives it; and though all cattle will not reliſh it well, yet if it proves beneficial to cows and ſheep only, the earlineſs and quantity of it renders it an object truly valuable; and it is with great ſatisfaction I find the premiums offered by the Society *for the greateſt quantity* have been attended with ſuch vigorous claimants. Their premium for *burnet on the pooreſt ſoil*, is alſo of ſingular utility. There are many thouſands of acres of a driving ſand, which will bear no crop hitherto known; if burnet will thrive on ſuch a ſoil, it is a valuable acquiſition indeed!

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I cannot diſmiſs this article without obſerving what a flagrant impoſition on the public was Mr. *Rocque*'s ſelling the ſeed for two ſhillings a pound; a ſeed which is produced at the rate of ten quarters *per* acre. However, I find it is already, in other hands, got down to four-pence.

Graſs-Seeds.

An untrodden field! No experiment has been made on ſeparated graſs-ſeeds: it promiſes greatly in idea; and accordingly became an object of the Society's attention. But if they have any where fallen ſhort in proportioning their premiums to the difficulty of the work, it is here. The premium is *For the greateſt quantities reſpectively of ſeveral ſorts gathered clean by hand, ſeparately ſown in drills, and kept clean from all mixtures of other graſſes and weeds; Ten pounds.*

It ſhould be conſidered that the buſineſs of *gathering* the ſeeds is very tedious and expenſive; the ſowing them

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in drills is the ſame, as no drill plough can ſhed them; the drills muſt be ſtruck by a line with a hoe, the ſeeds ſown by hand, and covered with a rake. After all this, the keeping it clean will, together, amount to a prodigious expence. I do not think it could by any means be effected under fifteen or twenty guineas an acre for the vernal and creſted dogſtail; and as to the reſt, which are not to be had in near ſuch quantities as thoſe under a monſtrous expence, it is impoſſible to ſay what it would coſt, for the drills ought not to be more than a foot aſunder. A premium, therefore, of ten pounds, and only for the *greateſt* quantity, can be no additional inducement to any one who ever had ſuch an undertaking in his thoughts.

The next premium is ſo worded as not (without explanation) to be underſtood. It is as follows: *For the greateſt quantity of land (not leſs than one acre) which ſhall be ſown with any one of the above-mentioned ſorts of graſs-ſeeds* * *un-*

* Nine ſorts.

mixed,

mixed, in the year 1767, *the Society will give a premium of twenty pounds for each quantity of land ſo ſown; the ſowing to be in drills, for the convenience of keeping the graſs from weeds.* Would not any one ſuppoſe that this was a premium of twenty pounds for *every* acre ſown? Elſe what is the Engliſh of thoſe words *for* EACH *quantity of land ſo ſown?* At firſt indeed it is ſaid, for *the greateſt quantity*; but one would apprehend the meaning to be twenty pounds for every acre, and twenty for the greateſt number of acres. A friend of mine was of this opinion; but the doubtful wording of the paſſage induced him to write to the Society's ſecretary Dr. *Templeman*, whoſe anſwer was, *he apprehended the Society meant only for the greateſt quantity.*

This affair of ſowing graſs-ſeeds unmixed in drills, and keeping them perfectly clean, is certainly an object of national importance: and was a premium given for every acre of one kind (to a certain ſum) twenty pounds, for inſtance; to an hundred pounds, or

five

five acres; ſuch five acres once cultivated, and the ſeeds adverti ſed at a reaſonable price, they would preſently extend to fifty, and ſoon to all the lands in the kingdom laid down with graſs ſeeds. By giving a premium in that manner every year for one ſort, the whole would be compleatly cultivated in nine years time, at the expence of an hundred pounds a year; and by properly arranging the ſorts to the ſoils that were laid with them, the benefit would be immenſe and boundleſs to the nation. The extending this noble object of the Society's attention, would however at laſt depend entirely on reducing the expence of laying down fields to graſs. The common hay-ſeeds at preſent neceſſary for an acre is twelve ſacks, which, at half a crown a ſack, is thirty ſhillings; ſometimes the price is two ſhillings, and then twenty-four will lay an acre. Now if the ſeparated ſeeds cannot be afforded in a term of years under that price *per* acre, the farmers will never uſe them: if the expence of both ſorts be equal, they

will

will prefer the *old* method—but tell them the ſeparated ſeeds will coſt four or five ſhillings an acre leſs, and they may poſſibly liſten to you.

Cultivation of Wheat, &c. *in Drills.*

The Society, with great judgment, gives an honorary premium, a gold medal, for the moſt accurate account of experiments on the comparative culture of wheat, rye, oats, barley, lucerne, ſainfoine, carrots, parſnips, parſley, turneps, beans, peas, and tares or vetches.

There is not a more dubious point in agriculture than the difference between the Old and the New huſbandry. We do not even know the merits of the old huſbandry: how ſtrange is it that of all the thouſand books of agriculture with which we ſwarm, not one can anſwer this plain queſtion, What is the profit of a crop of wheat? And I will allow it to be an anſwer, only to inform me what the profit is on any ſoil, and under any circumſtances which

which might attend an experiment. I know perfectly well that ſuch an anſwer is not complete; but even the reſult of one full experiment is no where to be met with: for as to common aſſertions, and giving the quantity produced, without every article of culture and expence, there is no dependance to be placed on ſuch accounts.

There has been ſome ſenſible experiments on barley and turneps, *&c.* publiſhed in *Mills*'s huſbandry, *as* performed in *Yorkſhire*.—They may be ſo: but by whom? and at what place? We have them on no better authority than another aſſertion of a gentleman that tranſplanted his turnep crop, which ridiculous practice Mr. *Mills* ſpeaks of in terms of recommendation. I call every practice ridiculous that does not pay the charges—and all recommendations of any, unleſs poſitive proof is produced of their quitting coſts, are of a pernicious tendency: but I ſhall ſpeak more of this practice by and by.

Mr. *Wynn Baker*'s few experiments are very judicious and concluſive: but the reader ſhould be extremely cautious of ever giving the ſame credit to calculations of a term of years drawn from an experiment of one or two, as to the immediate circumſtances of the experiment itſelf.

The experiments of M. *de Chateauvieux* I cannot ſpeak of in the terms of praiſe which many uſe in commending them: ſince the expences of each method are nowhere inſerted, nor ſatisfactory accounts of the old culture. It muſt be wretchedly deficient to produce only three times the ſeed.

As there is ſuch a great ſcarcity of ſatisfactory experiments on theſe articles, we cannot too much commend the highly laudable attention of the excellent Society to this curious branch of culture. We may, from their endeavours, hope, in no long time, to ſee experiments of undoubted authority, publiſhed on all theſe articles, ſo that the comparative value of both methods

methods of culture may be fully and determinately known.

Madder.

The ſum of five hundred pounds a year given in premiums of five pounds *per* acre for all madder planted, is one of the nobleſt, moſt effectual and ſpeedieſt methods of extending the culture of that valuable plant, that could have been deviſed; and I will anſwer for it, has been attended with a hundred times the benefit of five times the ſum given for the *greateſt quantity*. Five pounds is of ſome account towards the planting the firſt acre; and of great conſequence towards all the ſucceeding ones. The ſame obſervation which I have made on the preceding articles, the want of experiments, is equally applicable to this: we are nearly in the dark. However it cannot long be the caſe, as the Society proceeds ſo vigorouſly in encouraging it. The premium for the *greateſt quantity* on an

acre is extremely well judged, as the others are offered for *every* acre.

Bees.

The great conſequence theſe inſects are of to a trading nation induced the Society to offer five pounds (as far as two hundred) to every perſon who collects ten pounds of wax from his bees without deſtroying them. A moſt munificent premium! and cannot miſs of the wiſh'd for effect. The plan is certainly no chimera; Mr. *White* having publiſhed a ſatisfactory account of the boxes and operation.

Machine for draining Lands.

One of the moſt uſeful implements to huſbandry that could be invented. The common price of cutting water-thoroughs with a ſpade, in my neighbourhood, is, through ridge work, to open the furrows on one ſide, no plough having gone before, a penny a rod

a rod dug two inches below the furrows; and if it has been ploughed, a half-penny. On broad lands or ſtreatches to open the furrows on each ſide, unploughed, a half-penny, and ploughed, a farthing. This expence on a field of twenty acres, has, to me, amounted on flat land to twenty ſhillings, and but ineffectually done too. I have been often forced to have them ſcoured again at a freſh expence. The vaſt ſavings, therefore, which would reſult from a machine which could be worked by four horſes that would perform the operation well, are very great.

The machine, however, which the Society deſcribes, is only for paſture lands; for they require that the earth of the drain *be equally thrown out on both ſides*: now this would by no means do for ploughed lands, as we always throw the moulds of ſuch drains *one* way, that the furrows may be open on the ſide of the drain contrary to the natural fall of the land; to receive the water from off it. The plough the Society deſcribes would be of incomparable

uſe on graſs lands, where *all* the moulds are carted away to the compoſt dung-hill, or ſpread about the field: but I muſt wiſh greatly to ſee likewiſe a machine for draining ploughed lands; ſuch an one need not cut above four inches below the furrows.

Machine for ſlicing Turneps.

An object, however trifling in appearance, worthy of the Society's notice, and they have very judiciouſly offered their premium of twenty pounds for the beſt *cheap* one.

Turnep Cabbage.

A plant unnoticed till the ingenious Mr. *Baker* brought it into the field huſbandry. By his account of it, it is a moſt valuable acquiſition to the farmer; for the dependence on a crop of turneps late in the ſpring is ſo very inſecure, that ſome ſuccedaneum was highly neceſſary. And, in reſpect of this plant, I cannot ſee why a farmer ſhould not

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venture on planting a large quantity; for ſuppoſe he ſummer fallows his land for barley, he may as well plough his ſoil into five feet ridges—arched up, as yard ones—they will, if properly upſetted, lie as dry in the winter as the others: and then there is only the expence of the ſeed and tranſplanting, which may be performed for half a crown an acre. This is an inducement for aiming at the largeſt quantity; a different caſe from many of the preceding articles.

Boorcole.

Any article of culture, which is the leaſt promiſing, the Society aim at promoting, by offering premiums for it: but I do not apprehend this plant will ever prove more advantageous than the common method of ſowing coleworts, or coleſeed, as it is called, for the food of ſheep: however, this is ventured on conjecture.

Having thus ventured a few remarks on the articles of *Engliſh* huſbandry, which the Society have thought worthy of encouragement, I ſhall proceed to hazard a few conjectures on the probable advance of agriculture, from ſome points of encouragement which it yet has not met with.

It muſt undoubtedly be owned, that the Society's premiums are univerſally well directed; and although they are not, in every inſtance, of that force one could wiſh, yet the effect they muſt be attended with, cannot but extend the culture of thoſe vegetables they patronize, and caſt a light on the methods of culture they recommend to be compared. But experience teaches us that theſe encouragements, noble as they are, are inſufficient fully to determine the real merit of any one vegetable, or any one method of culture. The report of Mr. *Baker* to the *Dublin Society* gives us a ſketch of a moſt effectual manner of diſcovering the truth in matters of agriculture. The being

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at the expence of the experiments made to aſcertain it.

Thus, for inſtance, ſuppoſe the Society, not ſatisfied with the *effect* of their premiums on any particular article, ſhould make themſelves acquainted with ſeveral practical intelligent farmers in different parts of the kingdom, whom they could depend upon as to accuracy. They depute a perſon to view ſuch an occupier's farm; and after becoming acquainted with the preceeding culture of them, their crops, the ſoil, *&c. &c.* fix on one or two as they might determine, to be cultivated for ſuch a term of years, under their directions, and at their expence, in caſe the tenant does not agree to take the crops for his charges; or in any manner that would inſure the farmer from loſing by the experiment: many there are who would be contented with a certainty of their common mean profit; and if any ſurplus aroſe, it would be at the Society's diſpoſal to reward the cultivator with, in proportion to

the

the exactneſs of his obedience to their directions.

By entering into ſuch a train, the Society would ſoon meet with men of integrity and zeal for the well being of huſbandry, who would promote their aims to the utmoſt of their power. Experiments would tend to the direct point of information, which they want to acquire—none would be languidly purſued for want of money to carry them on—they might be made on a large ſcale—and, in one word, they would be proſecuted with ſpirit, when the cultivator knew a certainty of being re-imburſed the expences.

It would be difficult for ſuch farmers (in caſe ſome were not ſo ſtrictly honeſt as they ought) to defraud their employers: the prices of all country work, in any part of the kingdom, may be known perfectly on the ſpot, in a few days time; and the Society might limit the expence on every article, according to their own ideas.

But

But it is a needleſs caution to ſuppoſe, that doubtful people would be ſo employed; ſince there may certainly be found many farmers—gentlemen farmers—clergymen on their glebes, *&c. &c.* who would moſt readily undertake ſuch commiſſions, if ſatisfied for the loſs of their common crops.——The *Dublin Society* ſeems to put great truſt in Mr. *Baker*, and rely on him for a ſatisfactory account of the expending conſiderable ſums in huſbandry experiments, the planning of which they appear to leave to himſelf in a good meaſure. But this conduct might not in general be ſo adviſable, as the Society muſt know better the points of which they want to gain a certain knowledge. A few experiments are to be minuted in an inſtant, which are highly important, but the expence too great for a probability of their being executed by private people.

I.

Dig an acre of land in three different places, on three different ſoils (very light—rich—and very heavy) three feet deep; plant them with madder—and keep them perfectly clean from weeds, and the ſoil in a looſe crumbly ſtate by every method known. In three years dig up the plants to the former depth, and with that care as to leave no roots.——This experiment could not be executed under fifty pounds an acre.

II.

On ſeveral different ſoils let the following trial be made. The heavy wet land is the moſt uſual for wheat, I ſhall therefore ſpeak particularly of that. Give a complete ſummer fallow to twenty acres of land—divide the piece into two fields of ten acres each: ſpare no coſt in having a *moſt perfect* fence round each. Let one field

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be for the common husbandry; *viz.* 1. Wheat. 2. Turneps, if the land will admit them; if not, a fallow. 3. Barley. 4. Clover. 5. Wheat again, and so forth as before; and if the clover should fail any year, sow beans broad-cast, to be hand-hoed three times. Manure for turneps if sown; and if not, the clover the autumn after the barley is off. Let the other field be sown *every year* with wheat, by the drill plough for horse-hoeing. Let a thrashing floor be raised in the field, with two floors covered for two stacks; by which means no mistakes could ever be made, as in a barn filled from a variety of fields, which is likely enough in the common course of business. Let this experiment last three courses, or twelve years.

III.

Give a complete fallow to a piece of land of fifteen acres: divide it into three fields of five each: let one be planted with lucerne from a nursery, according to Mr. *Harte*'s directions.

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Let the next be drilled—and the other ſown broad-caſt by Mr. *Rocque*'s inſtructions. Let three ſmall pieces of land adjoining, of half an acre each, be paled in, and racks erected in them for the fatting of heifers, oxen, *&c.* and the produce of each five acres given preciſely, after weighing (ſlight engines neceſſary for that purpoſe might eaſily be raiſed) to reſpective cattle in each of the three diviſions. Let exact accounts be kept for ten years. Such an experiment would reduce the matter to a certainty on any one ſoil at a time.

IV.

Fallow a piece of thirty-five acres completely; divide it into fields well fenced in: throw each into courſes of huſbandry as follows:

No. 1. Cultivated according to Mr. *Randall*'s directions in the *Semi-Virgilian* courſe of huſbandry.

No. 2. The common huſbandry, commonly managed.

No.

No. 3. Ditto, completely cultivated according to directions of the Society.

No. 4. Ditto, a crop of wheat, and a fallow, without any intervening crop.

No. 5. Drilled every year with wheat.

No. 6. Ditto, and manured according to directions.

No. 7. Tranſplanted lucerne.

This experiment ſhould be continued twelve years. I could ſketch out a multitude of others; but my ideas are ſufficiently explained by theſe.—Any others might be executed on whatever plants the Society thought proper to recommend. I am well perſuaded, that in a dozen years a complete knowledge might be gained of any point in huſbandry at preſent unknown, and that in a much more certain and ſatisfactory manner than any *private* experiments can ever diſplay, unleſs undertaken and executed by a gentleman of large fortune, and liberal diſpoſition; for making experiments in agriculture, on a large ſcale, and managed in a complete

complete manner, is a buſineſs of great expence, and endleſs attention.

* * *

Before I finiſh this letter, I muſt make a few obſervations on the endleſs number of volumes which have been, and are perpetually publiſhing on agriculture. The publication of experiments really made, faithfully related, and ſufficiently authenticated by the addition of the perſon's name and place of abode, is of great and important conſequence to the publick good. But on the contrary, the very reverſe is the caſe of thoſe books which are publiſhed under the title of *General Treatiſes — Syſtems — Dictionaries*, &c. &c. &c. comprehending more ſoils, articles of culture, *&c.* than any one man can experimentally have a knowledge of: conſiſting of the moſt heterogeneous parts, purloined out of former books on the ſame ſubjects, without a common knowledge to diſcover the good from the bad.

Mr.

Mr. *Mills*'s volumes I take to be the beſt general ſyſtem we have: And to caſt a ſuperficial eye over them, What a multitude of practices are recommended of which the compiler is totally ignorant! They may, or may not, be advantageous, for what he, experimentally, knows—but all comes alike—the ſame authority paints the whole. The *old* huſbandry is univerſally run down—becauſe it is the old—not becauſe the *new* is better. Thus it is adviſed to tranſplant turneps—to ſow carrots and parſnips in drills; nay, even parſley—and, ſtranger ſtill, clover! And what is more capital than all the reſt—quotes from an abſurd author, as if to recommend the thing, a piece of advice to buy three hundred ſows, to be fed after they pig on boiled turneps, and then they and their pigs to be turned into clover while ſucking. It would make the reader nauſeate theſe papers, if I was to give the ſtuff at length. The vileſt heap of abſurdity that ever diſgraced common ſenſe! People who are eager in their huſban-

dry, read ſuch books; and as theſe ridiculous practices come recommended to them by people who ought to know better, they are tempted to try them. They do ſo—and of courſe fail, to their no inconſiderable loſs: hence a diſguſt is taken at the very idea of experiments or *book huſbandry*; the door is ſhut againſt beneficial trials; and a whole neighbourhood of farmers clap their hands with pleaſure at the gentleman's diſappointment, determining never to be miſled by books into any *new tricks*, which only tend to impoveriſh them. Such are the conſequences of giving attention to collections of agriculture: which, without heſitation, I pronounce to be the moſt pernicious books that are publiſhed—which tend to the utter extirpation of all uſeful experiment making, and bring an odium on every thing *new* in agriculture.

I have converſed on the ſubject with ſeveral gentlemen and common farmers, recommending to them ſome trials which I thought of conſequence: they generally anſwered me with ſome

ſhrewdneſs

ſhrewdneſs—"What! try experiments of this and that and t'other?"—Aye; why not? See here, don't you find how greatly it anſwered to this perſon? "To that perſon! Very good—Try experiments becauſe *J. G. N. O.* and *P. R.* tell me they'll anſwer—No, ſir—I leave experimenting to you—I'll have none on't."

It has been ſaid ſeveral times, and with very great juſtneſs, that what we want is a *Book of Experiments*. If any practical intelligent huſbandman, who occupied a middling ſized farm, would only keep an exact regiſter of all his buſineſs—ſuch a collection would form, as far as it extended, a complete ſet of experiments. Let us look over Mr. *Randal*'s *Semi Virgilian Huſbandry*, and Mr. *Liſle*'s *Obſervations on Huſbandry*, and it becomes apparent at once what a vaſt difference there between regiſtering experiments, and publiſhing books of agriculture in conſequence of having made experiments—They have certainly infinitely more merit than treatiſes written by people unpractiſed

in the buſineſs—but conſiſt only of the inferior part of experiments; that is, the *remarks* and *concluſions*: ſo that we have only the author's reflections, inſtead of that authority which enabled him to reflect; and from which we might draw very different concluſions. —Hence ariſes the difference I mentioned: the experiment is truth itſelf—the author's concluſions, matter of opinion, which we may either agree to, or reject, according to our private notions. The two books I mentioned conſiſt of a great number of remarks *really* made on huſbandry — and Mr. *Randal*'s drawn into very long inſtructions, on ſome prodigiouſly expenſive practices of huſbandry. A relation of ſuch practices having anſwered in fair experiments, would ſatisfy the reader——but mere aſſurances and general remarks are of no authority.

LETTER

LETTER VI.

I Shall not enter into a full enquiry of the great conſequence timber is of to a maritime nation; that is a point ſo clear and undiſputed as to need no elucidation: I ſhall only ſpeak of it as it naturally forms an important object in rural œconomics.

There are vaſt tracts of land in this kingdom which would anſwer better in plantations of trees proper for the ſoil, than cultivated to the purpoſes of agriculture. The real intereſt of the country requires that none but the worſt lands be covered with wood, inſtead of which we every day ſee ſome of the beſt land of a farm taken up with coppices and timber. But of all ſoils none are ſo well adapted to the production of underwood as ſuch extreme wet ones that they will not anſwer to drain and cultivate. Aquatics thrive on ſuch to very great profit.

The great and important object is timber oak; this will never be planted in large quantities but by men of conſiderable landed property: for there is no tranſplanting oaks into any corner, or in hedge-rows or avenues, as is practiſed with other trees that have no tap-roots. The only effectual way of propagating them is to *ſow* a whole field at once with acorns, and keep it perfectly well fenced in: a ſmall corner of a field, indeed, will do if entirely fenced in; and theſe plantations, on a ſmall ſcale, I wonder are not more common. Half an acre here and there, about a ſmall eſtate, would not be felt; and if triangular corners are taken, only one fence in three would be to do new. But we rarely ſee this publick ſpirit, which is no where more apparent than in the planters of oak; becauſe nobody can expect to reap although they ſow.

But noblemen, and gentry of large eſtates, cannot do more publick ſervice to their own poſterity and their country, than by planting ſuch tracts of land

land as will not anſwer ſo well otherwiſe to cultivate: and if profit is all their attention, there are many ſpecies of timber and coppice wood which would pay nobly for the expence of planting. Think of the vaſt quantity of land which is occupied by warrens and moors, which does not even contribute to feed ſheep: there are none but what would ſupport a number of uſeful trees, *&c.* that might be turned to ſome profit in twenty years, and yield annual cuttings.

It cannot juſtly be ſaid that it is a loſs to plant coppices inſtead of timber trees: firſt, becauſe they will thrive in many places which will not do for timber: and ſecondly, any plantations, which, by yielding firing, ſave timber trees from that deſtructive and abominable practice of cutting their heads off to turn them into pollards, and of ſtripping the boughs off to turn them into maypoles, by preſerving what already is timber, is, in fact, the ſame as planting timber.

Theſe deſtructive practices of ruining young trees, is owing to the tenants of eſtates being allowed all the croppings of pollard trees for firing.—There is nothing to be impeached in ſuch a covenant, when the landlord, or his ſteward, keeps a regular account of every tree on a whole eſtate, and ſees ſtrictly that nothing is converted into new pollards: for without a conſtant watch, many tenants cut off the heads of young timber trees, to add to the number of thoſe whoſe tops belong to them. This is a general practice when landlords live at a diſtance, and ſeldom viſit their farms: and whoever will take the trouble to view young pollards in ſuch farms, will generally find them to have been timber trees, which diſplayed no ſigns of ſuch deformity as to render it adviſable to cut their heads off.

If there are any ſigns of the pollards on an eſtate decreaſing, ſo as to render firing too ſcarce, and the landlord is unwilling to advance ſomething to his tenants for coals, it is infinitely the beſt way to plant a field with under-

wood,

wood, large enough to yield a cutting every year, inſtead of letting the young timber be ruined to ſupply the want. And it is to be remembered, that moſt farmers have a great averſion to all timber trees that ſhade any of their arable land; not without reaſon indeed; for where a farm is ſo badly managed, as not to have a proper border of graſs round every field, the trees which ſtand in the hedges neceſſarily drip on the ploughed ground, and kill whatever crop is ſown under them: for this reaſon, in all farms that are judiciouſly diſpoſed, broad borders are every where preſerved; for graſs is little the worſe for trees, unleſs quite covered with them; and there are a thouſand conveniences, beſides their beauty, in theſe borders of fields being conſtantly in graſs.

The only proper places for ſcattered timber trees, are, either in the hedge-rows of a farm, or ſpread thinly about the paſtures. There are ſome objections to the former—Unleſs the ditches are every where exceeding good and deep

deep ones, trees in the hedges are apt to make gaps; for idle people and ſportſmen have only to clap their hand againſt a tree ſo ſituated, and they break through the hedge at once, which they could not do without ſuch a help. This, however, is but little objection when the ditches are kept in perfect repair. But if a man plants an eſtate himſelf, I ſhould apprehend it much the moſt advantageous to let the trees be planted *by* the bank of the ditch, but not in it; for then nothing is ſhaded but the ditch and the borders, which is all the advantage attending their being in the hedge:—— or elſe ſcattered in clumps about the graſs fields — or in corners. I ſpeak this of thoſe trees which are propagated by tranſplantation, or ſetting ſhoots.

The moſt money which I have known made by gentlemen of timber planted by themſelves, has been of the aſh and the poplar: the latter in general is the quickeſt grower; but when the former likes the ſoil, it thrives nearly equal with

with the other; and in thirty, thirty-five, or forty years, either of them will grow to the value of three pounds, and ſometimes more. The aſh, indeed, proſpers better when the keys have been ſown where they are to remain, than tranſplanted — but the poplar is the eaſieſt propagated of any; for if ſeveral vigorous growing pollards are kept, they will yield every eight or ten years croppings of ſufficient length and ſize for planting; which is done with no other trouble than digging a ſmall hole two feet deep, and with an iron crow dibbling another at the bottom of that, in which the end of the ſhoot is placed, ram in the moulds, and the buſineſs is done: with this advantage, that they require no fencing—for the trunk will be large enough to defend itſelf againſt all cattle. I have planted many in this manner that have throve perfectly well.

The ungenerous proceeding, which will in future times be ſeverely felt, is the felling noble timber trees, without planting or ſowing any in their ſtead.

If

If gentlemen of *ſmall* eſtates, as well as thoſe of large ones, cut down trees, they ought ever to plant ſome others; two for one ſurely!——A ſmall fell will amount to twenty or thirty pounds—a ſhilling in the pound would fence off a corner of a field, and ſow it with acorns. Such a conduct has nothing of difficulty or expence in it; it ornaments an eſtate — and lays the foundation of future wealth for one's ſucceſſors. It is much the faſhion at preſent to plant; but it is not general to ſow lands with acorns, for they will not *ſhow* themſelves to advantage ſoon enough: pines, firs, limes, cheſnuts, *&c. &c.* are more uſed, becauſe they make a figure ſpeedily; whereas the oak takes a longer time to ſhow himſelf. But it ſhould be conſidered, that when a plantation of young oaks are thinned, and the rubbiſh grubbed up and cleared, nothing is ſo beautiful as the fine ſtraight trees left at a proper diſtance; and in reſpect of growth, in land tolerably ſtiff, I have ſeen them twenty feet high, and beautifully ſtraight,

at

at the age of fifteen years. There is no approach to a great houſe a quarter ſo magnificent as plantations of noble oaks—breaking upon the ſpectator to every point of view. A man cannot have the ſatisfaction of beholding the full effect of his labour—but the idea of perfection, which muſt attend it, is greatly flattering. Such plantations live after the nobleſt buildings are in ruin, and forgotten.

The Society's attention to this national object, as it moves the vanity of mankind in favour of the publick good, is juſtly conceived, and very properly executed: nor is there any reaſon to doubt of its having an exceeding good effect. Such numerous complaints of the decay of oak timber, in moſt parts of the kingdom, probably induced that munificent ſet of patriots to extend their premiums to this object. And if half the complaints that are made are true, it is but a melancholy affair: the more melancholy, when we conſider how eaſily private people might have prevented it, had

they

they planted even a few trees, when they cut down a great many.

If the reader turns to Mr. *Harte*'s excellent *Eſſays on Huſbandry*, he will find many exceedingly judicious hints on this ſubject, with ſome very ſenſible obſervations on ſeveral trees not yet commonly cultivated; much more to the purpoſe than any thing I can add to this deſultory ſketch.

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LETTER VII.

THroughout the foregoing papers I have, in every reſpect, conſidered the ſubjects of which I have treated, particularly in regard to *population*, and the *value* to the ſtate, of the people maintained by ſeveral profeſſions and buſineſſes. I have been the more attentive to theſe points, as the ſtrength and welfare of a kingdom depend ſo much upon them: and as the chief ſupport of a nation ever lies in the lower ranks of its people—I might poſſibly have ſaid in its poor—it will not be foreign to my general deſign, to enquire into the ſtate of this chief pillar of the kingdom, and the laws which are at preſent in being for their protection and increaſe.

Population, taken in a general light, depends chiefly on the poor inhabitants *of the country*. Thoſe of great cities, it is well known, are by no means ſo prolific—and the debauched, unhealthy

lives that are generally led in them, is a terrible ſcourge to the human ſpecies. That there holds no proportion between the increaſe in *London* and the country, is a fact too well known to need a proof here.

As the country is therefore the ſcene of thoſe living riches which give ſtability and glory to the ſtate, let us enquire how well our laws contribute to the encreaſe and ſecurity of ſuch wealth. If we caſt our eyes over the ſeveral nations of *Europe*, as well Proteſtant as Roman-catholick, and compare them with our own, we ſhall find, that no where has there, for many ages, been ſuch conſtant attention to this object as in *England*—indeed, in many kingdoms the legiſlature have not interfered in the matter, but left the whole affair to chance, and the common concurrence of accidental cauſes.

In this country, on the contrary, ſucceſſive laws have laid on the whole kingdom a moſt prodigious tax for the maintenance of our poor: in the mean amount of it, for a term of years, far

beyond

beyond what is commonly ſuppoſed: in multitudes of pariſhes exceeding greatly the land-tax at four ſhillings in the pound; and, if we conſider the confounded manner in which this heavy burthen is raiſed, the endleſs and heavy law-ſuits it gives riſe to, we may fairly pronounce it to be the moſt oppreſſive grievance under which the ſubject in *England* lies.

The perpetual litigations, occaſioned by the inequality—the chicanery and the ſquabbles about the poor's rates, render them the eternal peſtilence of the nation. The abſurd uncertainty of the law, in all that relates to the levying this tax, gives occaſion to thoſe harpies, the lawyers, to ſuck the blood of the whole nation. If there is any ſtanding tax for the maintenance of the poor, ſurely it ought to be aſſeſſed in the moſt equal manner, by certain and invariable rules—and all appeals from the aſſeſſment heard by judges impowered to determine all cauſes concluſively, and with as little expence as poſſible. The very contrary of all this

is the caſe: the law is vague, doubtful, and perplexed—the aſſeſſment is unequally, and, in general, ignorantly laid—and all appeals from it are, in other words, nothing but plunging into that damnable abyſs the —— But to ſpeak with leſs warmth.

The amount of this tax, and the litigious manner in which it is collected, are not only extremely burthenſome—but the *effect* of it, when raiſed, is, in general, pernicious to the good of the ſtate, and detrimental to the poor themſelves. Every thing provided by the ſeveral acts of parliament for their uſe, is indefinitely expreſſed—Money, lodging, apparel, food, *&c.* *&c.* as may be wanted, are all uncertain. The pariſh officers collect the tax, and manage the poor; that is, they aſſiſt them as they think proper; and whoever thinks himſelf neglected, has nothing to do but take a walk to the firſt juſtice of the peace, and make their complaint. Law, and right, and common ſenſe is then too often out of the queſtion; but Mr. Juſtice, if popularity

among the poor be his foible, ſaddles the pariſh with whatever burthen he thinks proper—and, on the contrary, if that ſet of people of the next rank be the object of his attention, then the poor may ply him, right or wrong, with their grievances, but meet with a deaf ear to all. In this caſe it is eaſy to conceive how uncertain true right, as eſtabliſhed by law, is here; and alſo, that good or bad as the laws may be, their execution depends, in too great a degree, on chance.

This undeterminate proviſion for the poor makes them depend on the pariſh for *all*. If they are infinitely diligent, ſober and induſtrious, while they are young and in health, what is the conſequence? Why, they lay up a ſmall ſum monthly to ſupport them eaſily and comfortably when aged or in ſickneſs: this is in the power of moſt. But ſuppoſe they are idle, drunken, and worthleſs——What attends ſuch a contraſt?—Why, preciſely the ſame effect as the other conduct is attended with: eaſe and comfort either in ſick-

neſs or age—not from themſelves, indeed—but the pariſh. Is it not therefore apparent, that unleſs the majority of them be perfectly *well inclined*, the neceſſary conſequence muſt be idleneſs! Who can ſuppoſe that ſuch men will work the harder againſt old age or ſickneſs, when every one knows ſo well that the pariſh *muſt* provide them in ſuch a day with all their own labour can.

I am very ſenſible that the miſeries of the poor are often mentioned as proofs of the villainy of pariſh officers: and that many of them are great villains, no one can doubt—no ſuch numerous body of men can be found among whom villains will not be diſcovered. But ſuch miſeries are ever owing to the neighbouring juſtices of the peace, who, in this caſe, have power rather too ample than otherwiſe. But let it be remembered, that one family in wretchedneſs — is ſeen — known — remarked — and blazoned out by all — and in conſequence of a few inſtances, the whole tribe of pariſh officers are re-

preſented

preſented as a parcel of deteſtable fellows. But let me aſk a plain queſtion. If a pariſh is oppreſſed very heavily, by the prodigious expence of providing for a large number of idle, drunken, debauched and inſolent poor—Who is it that trumpets forth their grievances? The farmers may not break nor be ſtarved, and no open and apparent miſery ſtares the ſpectator in the face—but are they to groan under ſuch manifeſt oppreſſion without pity, or a ſingle word ſaid in their behalf! Yet is this frequently the caſe——and at the ſame time the rates paid by a parcel of little farmers, who work ten times harder for a poor ſubſiſtence than the very people for whom they are ſo heavily taxed. It is ſaid they, like the poor, meet with redreſs from the juſtice—— True; if they can get it——they have the chance of the juſtice's foible being in *their* favour——but if it is not—— they muſt be content——No wonder, however, that when their day comes they ſhould not be ſo liberal as they ought. And is it natural to ſuppoſe

that a ſet of men, who are daily witneſſes of that dependance which the poor have on the pariſh—who ſee how little attentive they are to work hard againſt a time of want, and how ſeldom they will labour even common days, or common hours——who experience their inſolence perpetually——in ſhort, who behold the whole tenor of their lives ——Can it, I ſay, be expected that ſuch men will *freely* and *generouſly* contribute to the maintenance of people who could ſo eaſily maintain themſelves? ——I venture theſe aſſertions without any doubt. It is well known that the poor muſt, by law, be found all neceſſaries by the pariſh, if they cannot find them for themſelves: this *fact* is ſufficient——without recurring to the teſtimony of common experience, I am certain every reaſonable perſon will agree with me, that the conſequence muſt be as I have ſtated it.

From theſe conſiderations, I muſt own myſelf an enemy to that general abuſe which is thrown, ſo undiſtinguiſhably, on all pariſh officers: we

ſhould

ſhould remember that the number of people who, by turns, ſerve thoſe offices, is immenſe——ſo great, that any general charge upon them, of more than common inhumanity, is abſurd and ridiculous——We ſhould not be ſo free in condemning ſo conſiderable a ſet of people unheard——we ſhould bear in mind the tendency of the poor laws; and rather throw the blame on thoſe encouragers of idleneſs, than on a ſet of men, who, from their ſituation, muſt know the merits of the poor better than others.

It is agreed, by the moſt ſenſible politicians, that the true riches of any ſtate conſiſt in the employment of the labouring poor; and all countries will flouriſh in proportion to the quantity and value of their labour. *England*, I have already proved, depends chiefly on the culture of the earth, which is principally effected by the labouring poor——conſequently any loſs of labour is a loſs to the ſtate. A waſte acre of land is a publick nuſance; and, in like manner, the loſs of a ſingle

hour's work, of a labouring hand, however ſmall, is nevertheleſs a publick one; and it is neceſſary, by enabling ſuch hands always to find employment, to prevent ſuch a loſs. What a wretched policy muſt it therefore be, by any miſguided laws, to give the leaſt encouragement to idleneſs, which is conſtantly attended by ſuch a prodigious loſs to the publick! That the poor ought to be well fed——well cloathed——and live in that *warm* comfortable manner, requiſite to *Engliſhmen*, is a point of undoubted conſequence——and which cannot be contradicted; but the enabling them to live in this manner, at the expence of the publick good, in a loſs of a part of their labour, is the grievance I at preſent complain of.

Compare the preſent ſtate of our poor, in reſpect of laborious induſtry and ſobriety, with an ideal ſtate of them if this *total* dependance on the pariſh was at an end. On *this* ſide the way lives a little farmer, an exceſſive hard working man, very ſober, and yet

ſcarce

ſcarce able to live——On *that* ſide ſee a poor family, they will eat much better than the farmer——have their tea once moſt certainly, and perhaps twice a day; will not work harder than part of their preſent maintenance require; for twenty to one but the pariſh pays their rent, and finds them wood; and if the leaſt ſickneſs or accident happens to any of them, they immediately come to the pariſh——and when old, and paſt hard work, become wholly chargeable; when the money they have ſpent in the ſingle article of tea and ſugar, *ſaved*, would entirely prevent ſuch charge——or conſtant labour while in health, double the amount of it.——Compare the little farmer with theſe his neighbours——Is it by any means juſt that *his* induſtry ſhould be taxed to ſupport *their* idleneſs?——But all I have ſaid in relation to theſe country labourers, is a hundred times more ſtriking amongſt poor manufacturers——when *they* work tolerably, they earn three or four times the pay of the labourer, conſequently are able

able to indulge proportionably in idleneſs, &c.

I never omitted any occaſion of making whatever remarks I was able on the conduct of the poor in relation to their dependance on their pariſhes: and I never yet knew one inſtance of any poor man's working diligently, while young and in health, to eſcape coming to the pariſh when ill or old. Some will aim at taking little farms—but if, by any means, they are diſappointed in their endeavour, they conſider the money they have already ſaved as of no *future* value, but ſpend it long before they really want it. I have frequently heard labourers, in the full perfection of their ſtrength, talk of the pariſh maintaining them, on the very idea of any accident and illneſs; men, whom I have perſonally known to earn two pence, three pence, and four pence a day more than the common pay of the country, and which others, while in health, are obliged to ſubſiſt on. I have conſtantly experienced, and for

ſome

ſome time, that numerous families that are completely cloathed by the pariſh, will let their cloaths drop in pieces, without being at the trouble and expence of ever *mending* them, at the very time they have every day drank their tea ſweetened with nine-penny ſugar. It would be endleſs to particularize all the multitude of inſtances which myſelf, and I will anſwer for it, every other farmer could, from their own knowledge, quote of this kind: and whoever attends to theſe points among the poor, will *always*, I may ſay, find it owing to the certainty of falling on the pariſh when they are in want.

I therefore clearly determine, that the preſent laws, relative to the ſupport of the poor, are univerſally encouragers of idleneſs, drunkenneſs, and tea-drinking amongſt them; and that, as ſuch, they are highly pernicious to the welfare of the kingdom.

And here I cannot but obſerve, that, as low a figure as *tea-drinking* may make in this trio——it is nevertheleſs of wonderful extent and conſequence:

As

As much ſuperfluous money is expended on TEA *and* SUGAR, *as would maintain four millions more of ſubjects in* BREAD*. If it is conſidered what a fatal enemy exceſſive tea-drinking is to the human body—how much it impairs the vigor of the conſtitution, and debilitates the mind, the pernicious influence of it will be apparent; and it ſhould be remembered, that the ordinary adulterated ſort, which is drank by the poor people, is attended with much worſe effects than the fineſt ſorts uſed by the rich. It has been aſſerted, and I believe on very good authority, that exceſſive tea-drinking is of more fatal conſequence to the encreaſe of the human ſpecies, than even the immoderate uſe of ſpirituous liquors. Nor ſhould it be forgot, that the trade we carry on for tea is totally *againſt* us in the balance. It is a branch of commerce by which we perpetually loſe: thus burying our money in an unfathomable gulph, for a pernicious commodity

* Eſſays on Huſbandry, p. 166.

that

that tends to our very ruin. Our legiſlature taxes every *neceſſary* of life; ſurely this vile *ſuperfluity* calls aloud, in its abuſe, for the ſame reſtrictions! ——But to proceed.

The law of *ſettlements* is attended with nearly as many ill conſequences as that of *maintenance*. I have ſaid enough to prove of how great importance our labouring poor are to the publick welfare; the ſtrength of the ſtate lies in their numbers: but the prodigious reſtrictions thrown on their ſettlements, tend ſtrongly to prevent an increaſe of their numbers. One great inducement to marriage, is the finding, without difficulty, a comfortable habitation——and another nearly as material, when ſuch requiſite is found, to be able to exerciſe in it whatever buſineſs a man has been educated to, or brought up in. The firſt of theſe points is no ſuch eaſy matter to be accompliſhed; for it is too much the intereſt of a pariſh, both landlords and tenants, to decreaſe the cottages in it——and above all, to prevent

their

their increaſe, that in a proceſs of time habitations are extremely difficult to be procured. There is no pariſh but had much rather its young labourers ſhould continue ſingle; in that ſtate they are not in danger of *becoming chargeable*; but when married the caſe alters: all obſtructions are therefore thrown in the way of their marrying; and none more immediately than that of rendering it as difficult as poſſible for the men, when married, to procure a houſe to live in——and this conduct is found ſo conducive to *eaſing the rates*, that it univerſally gives riſe to an open war againſt cottages.

But ſuppoſe the young labourer or manufacturer to be an inhabitant, by ſufferance, of a pariſh to which he does not belong: the officers of ſuch pariſh, the moment they hear of his intention to marry, give him notice to quit their pariſh, and retire to his own, unleſs he can procure a certificate that neither he, nor *his*, ſhall ever become chargeable to them. The man applies to his own pariſh for ſuch certificate—"No; grant

grant a certificate!——Never will we do that—Let marrying alone, and live where you are——but if you come here with your wife——you know what lodging we have for you; our houſes are full already."——Such is the language in anſwer to the requeſt; and in millions of inſtances is attended with the deſired effect. The intended couple dread the *diſagreeableneſs* (perhaps *impracticability)* of living in a little cottage with ſeveral other families——one to themſelves is not to be had——if any are actually empty, the landlords of the pariſh take care they ſhall not be ſo filled: nay, how often do gentlemen, who have poſſeſſions in a pariſh where ſuch cottages come to ſale, purchaſe them, and immediately eraſe them from the ground, that they may never become the *neſts*, as they are called, *of beggars brats*; by which means their tenants are not ſo burthened in their rates, and, of courſe, their farms lett the better:——for the *rates* are conſidered as much by tenants as the *rent* of a new farm.

In

In this manner cottages are the perpetual objects of a parish's jealousy—— The young inhabitants are deterred from marrying, because of the difficulty of procuring a habitation: a hearty stout labourer that earns good wages, aims at having a neat comfortable house to live in, and cannot bear the idea of living in common with others: but all his wishes are too often frustrated by the scarcity of cottages. Nor is the hardship of removals less: a man is resident in a parish, where, by his connections, or nature of his business, he is much better able to maintain himself than in any other place——this circumstance often is, as three to one.——He marries, immediately he receives warning to quit this place, where, alone, he can advantageously support himself, and is driven to another to live in a ten times more uneasy manner, and where he is unable to make near his former earnings. His lot is hard; and his example hangs *in terrorem*, to prevent others from being guilty of the folly of marrying.

In

In whatever light we conſider theſe points of ſettlement and maintenance, they will regularly be found to encourage idleneſs, and prevent population. There cannot be two greater miſchiefs happen to any nation than theſe; and a country, which is entirely ſupported like this by the induſtry of its inhabitants, ought, in every poſſible manner, to rectify any ſuch tendency in its laws; for it is ſurely a moſt melancholy reflection, that vaſt ſums of money ſhould be raiſed for the direct contrary effect to what they really are attended with.

What we therefore want, from the wiſdom of the legiſlature, is a total abolition of all our poor laws, and the immediately framing others in their place which would not be liable to the ſame objections. The foundation on which ſuch new laws ſhould be laid is clearly—*To maintain thoſe who* CANNOT *maintain themſelves, and who could not have ſaved a ſufficiency to ſupport them when they can earn little or nothing.* For if hearty ſtrong young people are to ſpend in ſuperfluities (particularly tea)

and loſe in good times by their not working a full portion of labour—what would maintain them when ſick or old, ſuch ſhould have no relief from the publick. But all who meet with ſuch misfortunes of lameneſs, or ill health—or were otherwiſe incapable of maintaining themſelves, who, while in better circumſtances, behaved induſtriouſly and frugally—on ſuch certificates from the miniſter, *&c.* they ought to be taken perfect care of:—Not, however, in the pariſh by pecuniary gratifications; but in *Hundred houſes of Induſtry*, which will prove ten times as effectual in whatever concerns their life, health, and welfare.

And, as a means of preventing the poor being ſo blameable in future times, ſuch houſes of induſtry ſhould, indiſcriminately, take all poor's children who apply for relief, or who, having large families, cannot properly bring them up without aſſiſtance from their pariſh. This would be attended with a wonderful effect; for nine out of ten of the worthleſs among the poor, were

were brought up by their parents in idleneſs and pilfering. By maintaining them in ſuch a *Houſe*, they would be made to work at a variety of unlaborious buſineſſes—they would never be ſuffered to be idle—they would be kept from all thieving and beggary; and when of a proper age introduced to the world with a fifty times better chance of proſpering in it, than ſuch as iſſue immediately from their parents cottages—In general I mean;—there is no argument but what will admit of ſome exceptions; but in this caſe I am certain they are extremely few.

Whatever management of the poor took effect, they ought never again to have a *certainty* of being maintained by others, when a day of want came. ——Such aſſiſtance ſhould be freely granted to all who deſerve it, but no others.——Was this once the caſe, they would beſtir themſelves while in health and youth to practiſe a life of ſober induſtrioufneſs, that they might be intitled (when misfortunes came that

were paſt their power to remedy) to protection and maintenance from others. Nor can I ſee where any hardſhip can be found in this—for aſſerting it, is nothing leſs than ſaying, That diligent, ſober, and valuable people are to be taxed to maintain others in drunkenneſs, idleneſs, and debauchery. For where is the difference between paying them the wages of ſuch iniquity, and maintaining thoſe in ſickneſs and old age, who ſpent the produce of their health and youth in alehouſes and the tea-table? If there is any ſuch difference, my apprehenſion is not quick enough to catch it.

Let us conſider what prodigiouſly uſeful eſtabliſhments, what noble foundations for future induſtry and ſobriety might be laid, with the vaſt ſum our preſent poor rates would pay the intereſt of—Take an account of the mean ſum raiſed by each pariſh—eaſe the whole nation of half, or a third, of ſuch amount, and on the credit of the remainder, borrow the ſums ſufficient for extending the houſes of induſtry

over

over the whole kingdom—limit the reception, as I before-mentioned, and the infinitely good effects would be apparent in a term of years—the good of them could not be perfectly underſtood, until the children brought up in them were put into the world in ſervices, uſeful trades, and occupations of huſbandry. In a future generation we might expect a different race of poor.

The moſt common objections to theſe *Houſes of Induſtry* are—The hardſhips of confining elderly people, and taking them from their *connections*; and, ſecondly, The great fear there is, that the gentlemen who are the truſtees will not, in future times, after the *novelty of the ſcheme* is over, give that due attendance in inſpecting the conduct of the overſeers and managers, that will always be requiſite for the good of the poor.—As to the firſt objection, it certainly has no real weight; for thoſe who cannot maintain themſelves, but live at the expence of others, have no reaſon to complain of the *method*

taken, provided the thing is properly done: it would be ridiculous, at any eſtabliſhment of this nature, to allow full liberty for the poor of the houſe to wander about the country at their pleaſure——it would counteract the very deſign of the foundation, and be productive of multitudes of evils. As to the *hardſhip*, there is none in it; for the queſtion ought certainly to be reduced plainly to this; We are to have the burthen of maintaining you; is it not reaſonable that while we maintain you, we ſhould do it where and in what manner we pleaſe? We will neither allow you to be vagabonds nor tea-drinkers—and thoſe two circumſtances are what raiſe a ſpirit in the poor to oppoſe the ſcheme in general. People who have ſpent their lives, without laying up enough to ſupport them while old, in a country ſo full of employment of all kinds as this is, to refuſe aſſiſtance unleſs they have it *where* they like, might as well make a bargain for the beſt green tea and twelve-penny ſugar every afternoon, before they accepted

cepted of warm cloathing, wholeſome food, and a good houſe over their heads.

As to the point of the truſtees, I freely own the objection is of great weight, and I do not in the leaſt doubt that a great part of the benefit which has hitherto been found to reſult from the few *Houſes of Induſtry* eſtabliſhed, is owing to the attention of the truſtees, and their conſtantly meeting on the appointed days to inſpect every part of the officers management. But if it is ſuſpected that this attention will, by degrees, wear off, it ſurely might eaſily be inſerted in the act of parliament, that ſuch a number of truſtees *ſhall* meet at the time appointed, under certain penalties to be levied on their whole body. There would be nothing unreaſonable in ſuch a clauſe, and it would effectually remove the objection.

As I have been particularly attentive to the effect of every thing I have mentioned in theſe papers, on population, it may not be foreign to the preſent

ſubject, to conſider of ſome means of promoting marriage amongſt the lower people. It has been obſerved by many authors, that it is *manners* alone which increaſe or decreaſe the number of people; and a very penetrating one of our preſent age, ſays, "Thus, when *Auguſtus* made laws againſt celibacy, thoſe very laws proved the *Roman* empire to be on the decline." And it has been remarked, that laws and ordinances to encourage matrimony, agriculture, *&c.* only prove a diſeaſe, but will never effect a cure. There is ſome reaſon in theſe aſſertions; but there is a circumſtance not generally remembered with them, which abates greatly of their validity: *The* UNIVERSAL *increaſe of what is called Luxury.*

It is impoſſible, as we poſſeſs the art of printing, that the world ſhould ever revolve into ages of darkneſs and blind ignorance: and as the invention of mankind is ever on the wing, in adding convenience to convenience, and elegance to elegance—as freſh branches of commerce are daily opened, and the products

products of every clime infinitely multiplied in civilized countries—a general increaſe of what is commonly called luxury muſt neceſſarily be the conſequence—and I do apprehend, as the *manners* of mankind grow more poliſhed and refined, the more they will tend towards thoſe vices which ariſe from a great inequality among them; and hence ſprings that celibacy complained of, and that diſregard of agriculture. And the cauſes which thus operate, being gradual—ſapping, moſt imperceptibly to individuals, the groundworks of ſimplicity and every ſpecies of frugality—and having their foundation in the very ſoul and ſpirit of the times—it is impoſſible that laws and ordonances, which are framed according to the aſpect of the day, can regularly combat with the very nature of things.——Thus far the objection has weight.

But does it follow, that becauſe ſuch a conduct cannot have an unbounded and univerſal effect, it ſhould therefore entirely be given up? Or is it to

be

be ſuppoſed, that becauſe laws cannot change the face of things, they ſhould not improve them? The moſt raging torrents, even the ocean itſelf, is, by the art of man——by the power of human laws——controuled and kept within bounds——why may we not therefore aſſert that good laws may have a great effect in oppoſing the manners of the times?

The quotation I gave of the laws of *Auguſtus* is of but little effect——thoſe laws happened to be promulgated at a time when the empire was actually enſlaved—no wonder it ſhould be on the decline——Arbitrary power, that canker that preys upon the vitals of the univerſe! had ſpread her black enſign over the empire——Is any concluſion to be drawn from laws made at ſuch a period? The *Roman* people was no more: no wonder that laws were made againſt celibacy.

Premiums are at preſent offered for agriculture in *England.* It is from thence concluded, by the ſame author, that it will not long flouriſh in this kingdom.

kingdom. But it is ſuppoſed that huſbandry, how far ſoever it may be off perfection, was never ſo effectually practiſed as at preſent. We ſuffer no change in our conſtitution, but are, in every apparent reſpect, in a moſt flouriſhing ſituation.——Extend the proſpect—Look into a future age, and ſuppoſe (what my ſoul ſhrinks to conceive) our liberty no more. Premiums may then be given for agriculture; and an argument drawn that *England* is on the decline——Wonderful ſagacity that!——*England* will be ruined, and thoſe premiums quoted as a proof ——premiums which can have nothing to do with it, and which could prove neither on the one ſide nor on the other.——But take any nation juſt enſlaved, and I defy the moſt ſagacious politician to quote one publick premium—law—act—deed, or any thing elſe, which will not tend to prove ſuch nation undone—or, as it is ſaid, *on the decline*; but at the ſame time it may be far from proving that the very ſame publick acts, *in a different period*,

would

would not have been attended with very different concluſions.

The premiums at preſent granted in *England* prove clearly enough that agriculture is not advanced to the perfection it is capable of, and that a ſet of publick-ſpirited individuals moſt patriotically endeavour to advance it as much higher as they are able: But can we conclude from hence that it will ſoon decline? Let a change in the conſtitution come when it will, it declines and fades away that moment; but ſuch a falling off has nothing to do with premiums. In the ſame manner laws againſt celibacy are to be conſidered; if concluſions muſt be drawn from them, every attendant circumſtance is to be conſidered before *one maxim* can be founded on them.

If a country, whoſe inhabitants are on the increaſe, forms laws againſt celibacy, and encourages matrimony, it is beyond a doubt ſuch laws, if properly framed and duly executed, will be attended with *ſome* good effect—the manners and principles of the times

may

may bear the *moſt* ſway; but this does not prove that every thing elſe is attended with none at all.

If therefore the legiſlature of this kingdom may make ſuch laws, to encourage population, as in their wiſdom appear the moſt wholeſome, without the imputation of acting vainly, and without any probable good effect—ſurely we have great reaſon to wiſh that ſome ſuch were framed. I have already endeavoured to ſhow that an alteration of our poor laws would have an exceeding good tendency in this reſpect, and what remained would conſiſt chiefly in rendering the marriage ſtate more eaſy than it is at preſent among the lower people, and, if poſſible, make a large family be of no inconſiderable value to the father of it. Marriage will ever flouriſh, when there is no danger of children proving an incumbrance. It is well known that *Colbert* exempted every poor man in *France* from all taxes that had ten children; and in the ſame kingdom we find, by the marquis of *Tourbilly*, that the peaſants

ſants on his eſtate married freely and begat children, when he had provided a maintenance for them in conſtant employment; whereas, before he improved his eſtate, they avoided marriage as the greateſt evil. I mention no particular plan of encouraging marriage; it being ſufficient to point out the expediency of the meaſure—the forming a bill will be much wiſer performed by the legiſlature, from their general information, than the ſchemes of any individual can.

There is one more point on which I ſhall venture a few reflections, as it materially concerns the population of this kingdom; and that is, the migrations of our people to the colonies.

I think I have proved that the moſt important object of our attention, whether conſidered in the light of trade, commerce, manufacture or population, is the duly cultivating the many vaſt tracts of waſte land which are in ſo many places to be met with in this kingdom. Until this object of attention be completely fulfilled, and the lands already

under

under culture improved to their utmoſt, it is impolitick to encourage any but neceſſary manufactures—and infinitely ſo to encourage thoſe that work on foreign products—I muſt here add, that it is yet more impolitick to ſuffer, in ſuch circumſtances, any migrations —for the moſt advantageous colonies we can plant is on our barren lands at home; the conſumption of our manufactures, *if that is the plea*, will be as great from a colony ſettled on our own wilds, as on *American* ones; the ſecurity of their conſuming our own manufactures infinitely greater, and the wealth ariſing from them to the nation of the moſt truly valuable kind. Let us people all the heaths of *England*, *Scotland*, and *Ireland*, and ſuch increaſe of ſubjects will never coſt us ſome thirty, forty, or fifty millions to defend them.

I know not, in imagination, a more melancholy reflection than the thought of ſome thouſands of poor *Germans* coming over to *England*——here ſupported by charity——and then, becauſe

cauſe we did not know where to beſtow them, to ſhip them off to *America*, for their children, in another age, to draw the ſword of r————n, and plunge it in the vitals of their *mother* country. Shame to our monſtrous land poſſeſſors!——Shame to thoſe *great men* who poſſeſs whole counties of uncultivated land!—More to their glory would it be to expend a *part* of their wealth in adding to the riches and population of their country, than to waſte the *whole* in the career of nauſeous *vanity*. Judge not of a nobleman's *greatneſs* by the number of footmen before his chair,—but the number of labourers on his eſtate; and never forget that there is fifty times more true luſtre in the waving ears of corn, which cover a formerly waſte acre, than in the moſt glittering ſtar that ſhines at *Almack*'s.

The ſenſible author of the *Eſſays on Huſbandry*, quotes a query propoſed to this nation in the reign of *James* the firſt——" Whether our colonies had not diſpeopled us viſibly, and thrown a damp

damp upon the culture of the earth? *England* began its plantations near an hundred years after *Spain*, and conſequently the effects thereof are not yet ſo viſible as in the other kingdom. But our inhabitants are ſenſibly waſted already, and it has a very ill effect upon our tillage and huſbandry in all the ſouthern parts of the iſland.—— So that, as the *trade of* England *grows* by the plantations, the *lands of* England *fall*; the gentry and the nobility ſink, and the ſecurity and ſtrength of the kingdom abateth."—

I am very far from aſſerting that *colonies* are, in general, prejudicial to a kingdom; I would only endeavour to prove, that they are ſo if planted before population is at its height at home —and that it is a great abſurdity to form migrations to waſtes and wilds three thouſand miles off, when we have ſo many amongſt ourſelves. And I am certain, that it has ever been held the wiſeſt policy to procure, by the moſt judicious means, a full comple-

ment of inhabitants——any meaſures that tend to a contrary effect, voluntarily embraced, muſt therefore be highly impolitick.

But there is a *particular* circumſtance in the preſent caſe, which merits the *greateſt* attention—and that is, the *ſecurity of preſerving* our colonies. For if we have poured forth *our own* inhabitants to people *them*, and involved ourſelves in vaſt debts to defend them; it is a melancholy conſideration if there is, even in idea, the leaſt reaſon to fear a loſs of the advantages we gain by them.

The probability of our colonies ſhaking off what *they* call the yoke of their mother country, is a ſubject of too extenſive a nature for me to debate in theſe deſultory papers. But a remark or two on a point of ſuch great importance, will not be miſplaced.

We ſhould remember, that our continental plantations are ſpread forth over ſuch a prodigiouſly extenſive country, now at their command, that were it

a quarter peopled, it would form the moſt potent empire upon earth—An empire, to which our *European* dominions would form, on compariſon, but a pitiful province.——We ſhould remember likewiſe, that were theſe colonies peopled, all *South America* muſt infallibly, in the natural courſe of all human events, fall under their dominion: A northern nation poſſeſſing *iron*, has ever conquered ſouthern ones that roll on *gold*:—beſides, the different capacity and diſpoſitions of the inhabitants of thoſe two parts of *America* are ſo very oppoſite, that ſuch an event as I have deſcribed, would be effected almoſt without a blow——It would be like a battle between the *Iroquoiſe* and the original *Mexicans*.

The queſtion turns entirely upon this point; Will the difficulties attending ſuch a rebellion as I am hinting at, overcome the natural courſe of an extremely potent people throwing off the ſovereignty of another people leſs powerful than themſelves?—The difficulties,

we are generally told, are theſe: *Firſt*, Thoſe ariſing from the vaſt extent of country over which the coloniſts are ſpread, which would throw many impediments on a conſpiracy or deſign of this nature; for ſuch ſchemes, when attended with ſucceſs, generally take place among a people collected nearly together. *Secondly*, It is aſſerted, that the preſent diviſion of the country into different colonies, under various governments, different religions, *&c. &c.* would render ſuch a ſcheme impoſſible, as they are as little united among themſelves as ever they can be with their mother country. *Thirdly*, That the event, ſuppoſing it was poſſible, muſt be extremely remote; for it was never mentioned as probable until the country is nearly peopled, and it will take many centuries to half people the whole.

In anſwer to theſe remarks, it may however be obſerved—That the extent of the country is a circumſtance far from proving the improbability of ſuch an

an affair. I quote the *Stamp Act*: Had the country been ten times as extenſive, the flame would have been the ſame throughout it:——the leaders in great affairs will find a quick conveyance very eaſy; and one general inſurrection at the ſame time throughout, would be connected in leſs time by half, than forces could be in readineſs to prevent them.—But the *various* colonies is a point quoted as an objection: —True; it may be ſo; but the Stamp Act! again—remember that firebrand of rebellion. The ſnake cut in pieces, with the names of all the colonies wrote on each joint—with this motto, *Join, or die*. We know too well, from that late affair, how ready they are to *join*, provided it be againſt their mother country—fifty times readier than when the ſwords of the *French* were at their throats.—As to the third reaſon, it is contradicted by themſelves; for it is aſſerted, on the beſt authority amongſt them, that they have doubled their inhabitants every twenty-five years ſince

queen *Elizabeth*'s reign.——From all theſe circumſtances, I think we have no reaſon to believe the objections of weight enough to bear down the *natural courſe of things*.

But let the danger be ever ſo minute, it highly behoves us to ſtop immediately all further emigrations—to hem in theſe ſturdy coloniſts with military governments; to put a ſtop to their extending themſelves further; to render it *impoſſible* for them to eſtabliſh any manufactures which would interfere with our own; and, laſtly, to have two or three excellent fortifications on the plantation coaſt, with the whole apparatus of dock-yards, *&c. &c.* and a ſtrong garriſon conſtantly in each.—As to the point of *manufactures*, the wiſdom of the legiſlature would beſt know in what manner to effect it: as it is a matter of *trade*, violence might be dangerous; the ſureſt method might be to render it more advantageous to *themſelves* to engage in other branches of buſineſs; ſuch as ſhip-building—working

ing iron mines—planting vineyards—and forming ſilk manufactories.

Having thus conſidered, as fully as I am able, thoſe points of conſideration, relative to our population, which deſerve all our attention; I ſhall conclude with earneſtly praying to God, that *the Manners of the People* may powerfully co-operate with the *Wiſdom of ſuch future Laws*, as I have ventured to mention.

SYLVÆ:

OR,

OCCASIONAL TRACTS

ON

HUSBANDRY

AND

RURAL ŒCONOMICS.

Comparative Profit of Paſture and Arable Land.

THE following calculation of the different profit attending arable and paſture land, is not drawn up merely from fancy, but from accounts I have kept of my own crops, and the information I have gained from ſeveral ſenſible farmers.

I take twenty acres, and ſuppoſe them an addition to a farm; but I ſhould premiſe, ſuch an one as will require ſome additional cattle to be kept for it, perhaps two horſes: but a farm of fifty pounds *per annum* may be ſo circumſtanced as to require no material ſtanding expences extraordinary for ſuch an addition, in which caſe the ploughings, *&c.* will not coſt near what I have laid them at; but the faireſt way is the ſuppoſition I have made. We reckon nothing is either got or loſt by four ſhillings *per* acre for a clean earth.

Calculation

Calculation of the Expences and Profit of farming a ploughed or pasture Field of twenty Acres for nine Years, on a Supposition that it is not a Farm by itself, but an Addition to another of Fifty Pounds per Annum, *the Soil wet, and a loose, woodcock, brick Earth on the Surface, for eighteen Inches deep, and under that a very good stiff Clay, improved by Land-draining.*

First Year, Fallow.

	l.	*s.*	*d.*
Rent charges - - - - -	15	0	0
First ploughing, a clean earth - -	4	0	0
Second ditto, ribbling it close overwart -	4	0	0
Harrowing it overwart - -	0	5	0
Rolling - - - - -	0	3	0
Third ploughing, a roving - -	2	10	0
Fourth ditto, a clean earth - -	4	0	0
	29	18	0

Second Year, Barley.

Rent, *&c.* - - - -	15	0	0
First ploughing, a clean earth - -	4	0	0
Harrowing down the ridges - -	0	5	0
Expences of manuring, at twenty loads per acre, and spreading the manure, supposed to be at the farmer's house -	10	0	0
Carry over	29	5	0

	l.	s.	d.
Brought over	29	5	0
Second ploughing the ſowing earth, as it may be done with a double-breaſted plough, to ſhut up the barks; that and the harrowing - - -	4	0	0
Seventeen coomb and two buſhels of ſeed-barley, at eight ſhillings and ſix-pence per coomb - - -	7	8	9
Two buſhels and a half of clover-ſeed, at twenty-five ſhillings per buſhel -	3	2	6
Harrowing and water-furrowing - -	0	10	0
Weeding - - - - -	1	0	0
Harveſting, two ſhillings and ſix-pence per acre - - - - -	2	10	0
Threſhing one hundred and ſixty coomb, at ſix-pence per coomb - -	4	0	0
Carrying out one hundred and ſixty coomb, at eight times, eight pounds; but as back carriage may ſometimes be got, ſay - - - -	5	0	0
Expences eight times at market - -	1	10	0
	58	6	3

Third Year, Clover.

Rent, &c. - - - -	15	0	0
Cutting twenty acres, and harveſting it	3	0	0
Threſhing thirty-two buſhels of clover-ſeed, at four ſhillings per buſhel -	6	8	0
Expences of carrying the ſeed out, and at market - - - -	1	15	0
Weeding the clover - - -	0	10	0
	26	13	0

Fourth Year, Wheat.

	l.	*s.*	*d.*
Rent, &c. - - - -	15	0	0
Ploughing, harrowing, and water-furrowing the clover-land, and ſowing the wheat, five ſhillings and ſix-pence per acre - - - - -	5	10	0
Ten coomb of ſeed - - - -	8	0	0
Weeding - - - - -	1	10	0
Harveſting, including all expences, five ſhillings per acre - - -	5	0	0
Threſhing one hundred coomb - -	5	0	0
Carrying out ditto, at five goings, back carriage three of them, and at market	3	0	0
Haulming, at one ſhilling and ſix-pence	1	10	0
	44	10	0

Fifth Year, Fallow.

Rent, &c. - - - - -	15	0	0
Expences the ſame as the firſt year -	14	18	0
	29	18	0

Sixth Year, Wheat.

Rent, &c. - - - -	15	0	0
Manuring, the materials ſuppoſed to be in the farmer's yard - - -	10	0	0
Ten coomb of ſeed blew-chaff wheat -	7	0	0
Sowing earth - - - -	4	0	0
Weeding - - - - -	2	0	0
Harveſting - - - -	5	0	0
Threſhing one hundred and twenty coomb, at one ſhilling and two-pence *per* coomb - - - -	7	0	0
Carrying out ditto, at ſix times, as before - - - -	5	0	0
	55	0	0

Seventh Year, White Oats.

	l.	s.	d.
Rent, &c. - - - -	15	0	0
First ploughing, a clean earth - -	4	0	0
Water-furrowing - - -	0	5	0
Second ploughing, a clean earth - -	4	0	0
Water-furrowing - - -	0	3	0
Third ploughing, sowing earth, and harrowing - - -	5	0	0
Twenty coomb of seed - - -	8	0	0
Weeding - - - - -	0	10	0
Harvesting, two shillings and six-pence *per* acre - - - - -	2	10	0
Threshing one hundred and twenty coomb - - - - -	3	0	0
Carrying out six times, and marketing	3	18	0
	46	6	0

Eighth Year, Tares and Turneps.

Rent, &c. - - - - -	15	0	0
One clean earth, and harrowing ten acres for tares, and water-furrowing, and rolling - - - -	2	10	0
Five coomb of seed-tares - -	2	10	0
Cutting, making, loading, and stacking of fifteen loads of tare fodder - -	2	0	0
Ploughing up the tare land, a clean earth - - - -	2	0	0
Overwarting another clean earth - -	2	0	0
Roving it - - -	1	5	0
First ploughing for turneps, ten acres, a clean earth - - - -	2	0	0
Second ploughing, drawing the ridges into barks - - -	1	0	0
Carry over	30	5	0

	l.	s.	d.
Brought over	30	5	0
Third ploughing, ribbling it overwart -	1	10	0
Harrowing it flat - - - -	0	2	6
Fourth ploughing, a clean earth; draw it on to the ſteach - -	2	0	0
Fifth ploughing, ſowing earth, up-ſet it, and harrowing - - -	2	5	0
Turnep-ſeed - - -	0	5	0
Firſt hoeing, at four ſhillings *per* acre -	2	0	0
Second ditto, at two ſhillings and ſix-pence - - - -	1	5	0
	39	12	6

Ninth Year, Wheat and Barley.

Rent, &c. - - - -	15	0	0
Ploughing and ſowing the tare-land with wheat, water-furrowing, &c. - -	2	10	0
Five coomb of ſeed red-ſtalked wheat -	4	0	0
Weeding - - - - -	0	15	0
Harveſting - - - -	2	10	0
Haulming - - - -	0	15	0
Threſhing ſixty coomb - - -	3	0	0
Carrying out ditto, &c. - - -	2	10	0
Ploughing and ſowing the turnep-land with barley, harrowing, rolling, and water-furrowing - - -	2	10	0
Eight coomb of ſeed-barley - - -	3	4	0
Weeding - - - -	0	2	6
Harveſting - - - -	1	5	0
Threſhing ſeventy coomb - -	1	15	0
Carrying out ſeventy coomb - -	1	10	0
	41	6	6

PRODUCE.

		l.	s.	d.
First Year.				
Sheep-feed worth		1	10	0
Second Year.				
One hundred and ſixty coomb of barley, at eight ſhillings *per* coomb		64	0	0
Feed for cattle		2	0	0
		66	0	0
Third Year.				
Feed of clover before it is ſeeded		20	0	0
Thirty-two buſhels of clover-ſeed, at one pound five ſhillings *per* buſhel		40	0	0
Feed after ſeed		2	0	0
		62	0	0
Fourth Year.				
One hundred coomb of wheat, at fifteen ſhillings *per* coomb		75	0	0
Feed for cattle		1	10	0
		76	10	0
Fifth Year.				
Sheep-feed		1	10	0
Sixth Year.				
One hundred and twenty coomb of wheat, at fourteen ſhillings *per* comb		84	0	0
Feed for cattle		1	10	0
		85	10	0

Seventh Year.

	l.	*s.*	*d.*
One hundred and twenty coomb of white oats, at eight ſhillings *per* coomb -	48	0	0
Feed for cattle - - - -	2	0	0
	50	0	0

Eighth Year.

Fifteen load of tares - - -	15	0	0
Ten acres of turneps to buy cattle in, and fatten on them, to ſell off in the ſpring, worth three pounds *per* acre -	30	0	0
	45	0	0

Ninth Year.

Sixty coomb of wheat, at fourteen ſhillings and ſix-pence *per* coomb - -	43	10	0
Feed - - - -	0	15	0
Seventy coomb of barley, at ſeven ſhillings and ſix-pence *per* coomb - -	26	5	0
Feed - - - -	1	0	0
	71	10	0

Firſt Year, Fallow.

Expences - - - -	29	18	0
Produce - - - -	1	10	0
Loſs - - - -	28	8	0

Second Year, Barley.

Produce - - - -	66	0	0
Expences - - - -	58	6	3
Profit - - - -	7	13	9

		l.	*s.*	*d.*
Third Year, Clover.				
Produce		62	0	0
Expences		26	13	0
Profit		35	7	0
Fourth Year, Wheat.				
Produce		76	10	0
Expences		44	10	0
Profit		32	0	0
Fifth Year, Fallow.				
Expences		29	18	0
Produce		1	10	0
Lofs		28	8	0
Sixth Year, Wheat.				
Produce		85	10	0
Expences		55	0	0
Profit		30	10	0
Seventh Year, Oats.				
Produce		50	0	0
Expences		46	6	0
Profit		3	14	0
Eighth Year, Tares and Turneps.				
Produce		45	0	0
Expences		39	12	6
Profit		5	7	6

Ninth Year, Wheat and Barley:

	l.	*s.*	*d.*
Produce - - - -	71	10	0
Expences - - - -	41	6	6
Profit - - - -	30	3	6

LOSS.

1ſt Year - - - -	28	8	0
5th Year - - - -	28	8	0
Loſs of 2 Years - - - -	56	16	0

PROFIT.

2d Year - - - -	7	13	9
3d Year - - - -	35	7	0
4th Year - - - -	32	0	0
6th Year - - - -	30	10	0
7th Year - - - -	3	14	0
8th Year - - - -	5	7	6
9th Year - - - -	30	3	6
Profit of 7 Years - - -	144	15	9
Loſs of 2 Years - - - -	56	16	0
Total profit in 9 Years - - -	87	19	9

which is nine pounds fifteen ſhillings and ſix-pence *per annum*, or nine ſhillings and nine-pence *per* acre *.

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* Nothing is reckoned for the ſtraw, as it is ſuppoſed to be made into the manure.

But I ſhould obſerve, that as a crop of clover-ſeed is the moſt uncertain and various of any that is grown, I have reckoned leſs for it by far than multitudes produce, though, at the ſame time, many bring nothing at all.

I know a field of twenty acres, which I have been often told by ſeveral who knew the crop, once produced the farmer five buſhels *per* acre. It was all down on a *Friday*, and the farmer ſuſpecting a change of weather, by great rewards to his workmen, and bringing caſks of ale into the field, and feeding them well, tempted them to work in an extraordinary manner all the *Saturday*, and cleared the whole into barn. It began raining in the night, and ſo much ſucceeding bad weather came, that the crops were, in general, greatly damaged. His produced, as I ſaid, one hundred buſhels, all which he ſold at three pounds ten ſhillings *per* buſhel, ariſing to three hundred and fifty pounds. And a few years ago I ſaw the ſame field with a crop of clover, which did not produce twenty pecks,

and

and that ſo wretched as to fetch nothing.

I read this calculation to a farmer, and he obſerved, that I ſhould reckon eighty buſhels for the crop; and as it is often grown, I will give another total, with that alteration, that the reader may adopt either, according to his idea of the chance.

				l.	*s. d.*
Profit as above - - - -				144	15 9
	l.	*s. d.*			
Add 48 buſhels - -	60	0 0			
Threſhing - - -	9	12 0			
				50	8 0
				195	3 9
Loſs - - - -				56	16 0
				138	7 9

which is fifteen pounds ſeven ſhillings and ſixpence *per annum*, or fifteen ſhillings and four-pence *per* acre.

As I mention back carriage in this calculation, I will explain my meaning. We generally carry our corn to the neighbouring ſea-ports, and load home with coals for blackſmiths, or any perſons that want them, who pay us eighteen ſhillings for the carriage of

a loading, twelve ſhillings *per* chaldron, and we generally bring one and a half. But as we may accidentally carry our corn where none is to be had, I make ſuch allowances as to bring it near the truth.

Calculation of nine Years Expences and Profit of twenty Acres of Graſs Land, the Soil ſuppoſed to be the ſame as the above Arable Land, with no other Difference than being Graſs or Ploughed.

First Year's Expences.

	l.	*s.*	*d.*
Rent, *&c.* - - - - -	15	0	0
Mowing, making, and cocking ten acres of graſs into hay, at three ſhillings *per* acre, with beer - - - -	1	10	0
Stacking, loading, *&c.* of ten loads of hay	1	10	0
Expences on four goings of hay when it is ſold, weighing, and market - -	0	16	0
N. B. Nothing is reckoned for carriage, as manure is brought back.			
Fifteen old crones †, bought in Auguſt	3	15	0
Expences in buying ſheep - -	0	4	0
Three cows, at five pounds each - -	15	0	0
A ſow, and ten pigs three weeks old - -	2	12	6
Carry over	40	7	6

† Old female ſheep.

	l.	*s.*	*d.*
Brought over	40	7	6
Suppoſing two acres to be manured each year with twenty-ſix loads *per* acre,			
Forty loads of clay, at two-pence half-penny *per* load - - - -	0	8	4
Twelve ditto of aſhes, mortar, or rotten dung, bought; ſix waggon loads, at eleven ſhillings and ſix-pence *per* load - - - - -	3	9	0
Expences of carrying it on, ſpreading, *&c.* - - - -	1	8	0
Turning and mixing manure - -	0	4	0
	45	16	10

Second Year.

Rent, *&c.* - - - -	15	0	0
Mowing, making, *&c.* of ſix acres of graſs - - - -	0	18	0
Stacking, *&c.* ſix loads of hay - -	0	18	0
Weighing, marketing, *&c.* - -	0	10	0
Expences of buying ſheep - -	0	1	6
A ſcore of old crones - - -	6	0	0
Manuring two acres as above - -	5	9	4
	28	16	10

Third Year.

Rent, *&c.* - - - -	15	0	0
Mowing, making, *&c.* eight acres of graſs, at three ſhillings *per* acre -	1	4	0
Stacking, *&c.* - - - -	1	4	0
Weighing, marketing, *&c.* - -	0	12	0
Expences on cattle - - -	0	2	0
Fifteen crones - - - -	3	15	0
Manuring two acres as above - -	5	9	4
	27	6	4

	l.	s.	d.
Fourth Year.			
Rent, &c. - - - - -	15	0	0
Mowing and making twelve acres, at three shillings *per* acre - -	1	16	0
Stacking, &c. - - - -	1	16	0
Weighing and marketing - -	0	18	0
Expences on cattle - - -	0	5	0
Fifteen crones - - - -	4	0	0
Manuring two acres as above - -	5	9	4
	29	4	4
Fifth Year.			
Rent, &c. - - - -	15	0	0
Mowing and making ten acres - -	1	10	0
Stacking, &c. - - - -	1	10	0
Weighing and marketing - -	0	16	0
Expences on cattle - - -	0	3	0
Fifteen crones - - - -	3	7	6
Manuring two acres as above - -	5	9	4
	27	15	10
Sixth Year.			
Rent, &c. - - - -	15	0	0
Mowing and making nine acres - -	1	7	0
Stacking, &c. - - - -	1	7	0
Weighing, &c. - - - -	0	14	0
Expences on cattle - - -	0	4	0
Fifteen crones - - - -	4	5	0
Manuring two acres as above - -	5	9	4
	28	6	4
Seventh Year.			
Rent, &c. - - - - -	15	0	0
Mowing and making twelve acres -	1	16	0
Stacking, &c. - - - -	1	16	0
Weighing, &c. - - - -	0	18	0
Carry over	19	10	0

	l.	*s.*	*d.*
Brought over	19	10	0
Twenty crones - - - -	5	0	0
Expences on cattle - - -	0	5	0
Manuring two acres as above - -	5	9	4
	30	4	4

Eighth Year.

Rent, *&c.* - - - -	15	0	0
Mowing and making eight acres - -	1	4	0
Stacking, *&c.* - - - -	1	4	0
Weighing, *&c.* - - - -	0	10	0
Twenty crones - - - -	5	10	0
Expences - - - - -	0	7	0
Manuring two acres as above - -	5	9	4
	29	4	4

Ninth Year.

Rent, *&c.* - - - -	15	0	0
Mowing and making ten acres - -	1	10	0
Stacking, *&c.* - - - -	1	10	0
Weighing, *&c.* - - - -	0	8	0
Twenty crones - - - -	3	15	0
Expences on cattle - - -	0	10	0
	22	13	0

PRODUCE.

First Year.

Ten loads of hay, wasted to eight, and sold in the winter at two pounds *per* load - - - - - -	16	0	0
Fifteen old crones sold fat, with their lambs, at fifteen shillings *per* couple	11	5	0
Carry over	27	5	0

	l.	s.	d.
Brought over	27	5	0
As no expences are calculated for the dairy, ſuch as wood, utenſils, *&c.* I ſhall lay the clear profit of the cows at four pounds each *, which is what I have generally made of mine, every thing paid, and yet kept a calf now and then for ſtock: one I reckon this year - - - -	12	0	0
I ſhall not explain all the method of managing the hogs, but lay the clear profit of a ſow at different ſums, ſuch as I have generally found my own produce - - - - - -	6	0	0
	45	5	0

* I find it is thought too high to reckon the profit of a cow at four pounds. But no one I apprehend will think it ſo, when they are informed that the common price of hiring cows (in the county in queſtion) is three pounds, for the *profit*—Judge then if it may not be reckoned at *four*. Mr. *Ellis*, in his *Practical Huſbandman*, alſo tells us, the common *clear* profit of a cow is four pounds—and from the beſt information I can gain, from *old* and *experienced* huſbandmen, I find they ever calculate the profit at that ſum, or rather more—when the ſummer-food is not reckoned. It is ſaid, in anſwer to my calculation, that the profit of a cow is forty ſhillings only, pigs included, in the weſt of *England*.—Now the ſummer-feed of ſix months, at two ſhillings *per* week, amounts to forty-eight ſhillings,—conſequently a cow yields (there) inſtead of profit, eight ſhillings a year loſs.

With ſome difficulty I gained, of a neighbouring farmer, a determinate piece of intelligence; *viz.* that he ſold

Second Year.	*l.*	*s.*	*d.*
Eight loads of hay, waſted to ſeven, and ſold at two pounds *per* load - -	14	0	0
Twenty crones, ſold fat at ſeventeen ſhillings *per* couple - - -	17	0	0
Three cows, at four pounds each -	12	0	0
One ſow - - - - -	6	5	0
	49	5	0

Third Year.			
Ten loads of hay, waſted to eight, ſold at two pounds *per* load - -	16	0	0
Fifteen crones, ſold at fifteen ſhillings *per* couple - - - -	11	5	0
Four cows, the new one at three pounds (the calf is now a cow) - -	15	0	0
One ſow - - - - -	6	10	0
	48	15	0

Fourth Year.			
Fourteen loads of hay, waſted to twelve	24	0	0
Fifteen crones, ſold *per* couple at fifteen ſhillings - - - -	11	5	0
Four cows, the new one three pounds five ſhillings - - - -	15	5	0
One ſow - - - - -	7	0	0
	57	10	0

ſold the milk of a cow, by meaſure, from *May* till *October* incluſive this year 1766. She gave 369 gallons, which he ſold for ſix pounds two ſhillings. I leave it to any one to judge whether her *winter* food came to forty-two ſhillings? There was nothing remarkable in the goodneſs of the cow, or her feed. As many better fed, as worſe.

Fifth Year.	l.	s.	d.
Twelve loads of hay, wasted to ten -	20	0	0
Fifteen crones, sold *per* couple at sixteen shillings - - - - -	12	0	0
Four cows, the new one at three pounds ten shillings - - - -	15	10	0
One sow - - - - -	5	0	0
	52	10	0

Sixth Year.			
Ten loads of hay, wasted to eight -	16	0	0
Fifteen crones, sold *per* couple at sixteen shillings - - - - -	12	0	0
Four cows - - - - -	16	0	0
One sow - - - - -	7	10	0
	51	10	0

Seventh Year.			
Fourteen loads of hay, wasted to twelve	24	0	0
Twenty crones, sold *per* couple at seventeen shillings - - -	17	0	0
Four cows - - - - -	16	0	0
One sow - - - - -	5	0	0
	62	0	0

Eighth Year.			
Twelve loads of hay, wasted to ten -	20	0	0
Twenty crones, sold *per* couple at sixteen shillings - - - -	16	0	0
Four cows - - - - -	16	0	0
One sow - - - - -	5	15	0
	57	15	0

Ninth Year.	*l.*	*s.*	*d.*
Twelve loads of hay, wasted to ten -	20	0	0
Twenty crones, sold *per* couple at fourteen shillings - - - - -	14	0	0
Four cows - - - - - -	16	0	0
One sow - - - - - -	7	0	0
	57	0	0

EXPENCES.

1st Year - - - - -	45	16	10
2d Year - - - - -	28	16	10
3d Year - - - - -	27	6	4
4th Year - - - - -	29	4	4
5th Year - - - - -	27	15	10
6th Year - - - - -	28	6	4
7th Year - - - - -	30	4	4
8th Year - - - - -	29	4	4
9th Year - - - - -	22	13	0
	269	8	2

PRODUCE.

1st Year - - - - -	45	5	0
2d Year - - - - -	49	5	0
3d Year - - - - -	48	15	0
4th Year - - - - -	57	10	0
5th Year - - - - -	52	10	0
6th Year - - - - -	51	10	0
7th Year - - - - -	62	0	0
8th Year - - - - -	57	15	0
9th Year - - - - -	57	0	0

Produce of nine years - -	481	10	0
Expences of nine years - -	269	8	2
Total profit in nine years - -	212	1	10

which is twenty-three pounds eleven shillings and two-pence *per annum*, or one pound three shillings *per* acre profit.

The above account diſplays the vaſtly ſuperior advantages of graſs, with us, to arable land.

You will certainly remark, that nothing is reckoned for loſſes of ſtock; but in anſwer to that I ſhould obſerve, that nothing is calculated in the arable account for ſome bad years, when in ſuch land not a quarter of a crop is produced: and I do not mean this calculation as perfect (that is impoſſible) but only to diſcover the *proportion* between the one method and the other; and from what I have obſerved, and gathered from the information which the moſt intelligent farmers can give me, I am clearly of opinion, that the chances, on the whole, are much in favour of the graſs-land, the crop of hay and feed being much more regular than thoſe of corn, clover, or turneps; and ſuppoſing the eighty buſhels of clover-ſeed, yet the graſs profit far exceeds the arable, even then; but, as I obſerved, the probability lies againſt the latter, ſuppoſing the profit to be only

only nine pounds fifteen ſhillings and ſix-pence *per annum*.

I may remind you, that I ſuppoſed this twenty acres to be an addition to a farm, not one by itſelf, and ſo compared the reſpective profits; therefore I have not allowed any thing for the feed which the above-mentioned cattle may accidentally have on the arable land, or turneps which they may expend in the winter; and for this reaſon, becauſe, although it appears to me that graſs is the moſt profitable huſbandry, yet a certain quantity of ploughed land ſhould undoubtedly be a part of every graſs farm, for the raiſing turneps, ſome artificial graſs, and ſtover enough for the winter's food.

The three laſt years I could have reckoned two ſteers fed on the graſs ready for turneps in the winter, and in ſome other articles I have underlaid the matter, I am certain, greatly, leſt the want of winter ſtover ſhould be an objection.

I reckon

I reckon the hay all ſold at forty ſhillings; whereas it is ſcarce ever in nine years leſs than that, and frequently fifty or ſixty ſhillings: but I think no objection can be made in this reſpect, as when I calculate the profit of the graſs-land I have at preſent, I never think of doing it otherwiſe than in the manner above, as ſuch is the profit ariſing from my having ſuch a quantity of graſs, and which I could not make of any ploughed land without the graſs. If all my arable fields were employed in growing fodder for a very large quantity of graſs, the profit would be five times as large as from raiſing corn in the common courſe of huſbandry.

* * *

In addition to the foregoing calculation, I ſhall give another made by a friend of mine in my neighbourhood, founded on the event of five years compariſon, in his own farm.

Expences

Expences on an Acre of Arable Land four Years, the Proportion taken.

	l.	*s.*	*d.*
Rent	1	0	0
Tythe and town-charges	0	5	0
Manure	0	10	0
Ploughing and harrowing	0	10	0
Seed	0	4	0
Fences	0	1	0
	2	10	0

Produce in four Years.

Turneps	2	10	0
Nine coomb of barley, at eight ſhillings	3	12	0
Clover	2	10	0
Seven coomb of wheat, at ſixteen ſhillings	5	12	0
	14	4	0
The fourth	3	11	0
Deduct expences	2	10	0
Profit *per* acre	1	1	0

PASTURE LAND.

EXPENCES.

Rent	1	0	0
Tythe and town-charges	0	5	0
Manure	0	10	0
Weeding, cleaning and rolling	0	4	0
Mowing, making, *&c.* *&c.*	0	6	0
Fences	0	1	0
	2	6	0

PRODUCE.

	l.	*s.*	*d.*
Thirty-five hundred weight of hay, at two ſhillings	3	10	0
After-feed	0	10	0
	4	0	0
Expences	2	6	0
Profit *per* acre	1	14	0

In this calculation the produce of the arable land is ſuch as, I am certain, my friend met with, or he would not have minuted it; but it is ſuch as not one in ten will meet with, even if they pay a pound an acre rent.

In addition to theſe calculations, I ſhall inſert a minute or two reſpecting the profit of graſs lands.

EXPERIMENT. 1763.

Food, Produce, and Expences of a Dairy of four Cows in a Year.

Their food, four ſmall paſtures, amounting to ſixteen acres, or thereabouts. Two of them I fed in the ſpring,

ſpring, rather late before I ſhut them up for hay: another, of ſix acres, the cows had to themſelves till the others were mown; and then I ſhut that up for a rowen (aftermath) crop of hay, cutting it the twentieth of *Auguſt*.

Therefore they had firſt that of ſix acres, another of two acres, which is common for all my cattle, being never mown; next a five-acre piece, after the hay was cleared from it, and then the other field of three acres: beſides which, they ran four days in my clover, till, finding the butter taſted, I took them out.

It will appear alſo, by the following account, that they eat in winter one ton and ſeven hundred weight of hay, and two loads and a half of ſtraw bought for them, beſides their ſhare of ſome which grew on my farm, the whole of which (ſoft corn ſtraw) amounted only to five acres of oats for them and four horſes too; the chief of my lands lying that year fallow.

EXPENCES.

		l.	*s.*	*d.*
1763. April 27.	For two hundred weight of hay - - -	0	5	0
August 8.	Twenty-five ditto -	1	17	6
Nov. 30.	A load of ſtraw -	0	14	0
Dec. 30.	Half a ditto - -	0	5	0
1764. Feb. 15.	Ditto - - -	0	3	0
Feb. 20.	A load ditto - -	0	11	0
Sundry expences in the dairy - -		0	10	10
		4	6	4

In the above account is included nothing for firing, which coſt me very little, as the ſmall buſh-faggots, which I grub up on borders of fields to clear them for the graſs to grow, completely ſerved my dairy this year: theſe are difficult of ſale, fetch but little, and muſt be rooted up if no cows are kept.

PRODUCE.

	l.	*s.*	*d.*
Butter, milk, and cream; the butter ſix-pence *per* pound, the cream ſix-pence *per* pint, the milk one half-penny *per* pint (the market prices)	9	4	8
Seven hundred and ſixty pounds of cheeſe, ſold at two-pence half-penny *per* pound - - - -	7	8	6
Carry over	16	13	2

	l.	*s.*	*d.*
Brought over	16	13	2
The value of two yearlings, kept for ſtock (valued by a farmer, who offered to take them at the price) - - -	3	10	0
Two ſucking calves, ſold at -	0	15	6
	4	5	6
	20	18	8
Deduct expences - - -	4	6	4
Profit, four pounds three ſhillings *per* cow - - - -	16	12	4

A notable farmer's wife would have made five pounds *per* cow. There is a great difference between one kept merely for convenience, under a ſervant's management, and a farmer's.

EXPERIMENT. 1764.

Food, Produce, &c. *of four Cows a Year.*

Paſtures the ſame as the laſt year. Turned them into an acre of the five-acre field the ſixteenth of *May*, beſides which, they had the three acres to themſelves. Mowed this year the ſix acres, and the remaining four of the five acres. No clover.

EXPENCES.

1764.	*l.*	*s.*	*d.*
Faggots for firing - - -	1	10	0
Eighteen hundred weight of hay - -	2	5	0
Half a load of ſtraw - - -	0	6	0
May 6. Four hundred weight of hay -	0	10	0
Sundries - - - - -	1	3	10½
	5	14	10½

The fire-wood was moſt of it this year bruſh-faggots out of a wood, and but few of the ſmall buſh-faggots: I am therefore enabled better to calculate their value. Beſides the ſtraw bought, they had what was to ſpare of my farm.

PRODUCE.

1764.	*l.*	*s.*	*d.*
June 14. Three calves, ſold to the butcher - - - - -	3	6	0
Aug. 18. Seven pounds and a half of butter - - - - -	0	3	9
Nov. 1. For two hundred and thirty-eight pounds of butter, made to October 22 - -	6	4	9½
For four hundred and ſeventy-three pounds of cheeſe, at two-pence half-penny *per* pound, made to the end of Auguſt -	4	18	6½
For milk and cream to Oct. 22	1	11	6
March 1. For eighty-two pounds of butter from Oct. 22, to Jan. 17	2	8	0
For milk and cream to Feb. 14 -	0	10	6
Carry over	19	3	1

		l.	*s.*	*d.*
Brought over		19	3	1
For two hundred and thirty-six pounds of cheese, eighty at two-pence half-penny, and one hundred and fifty-six at two-pence *per* pound	- -	2	2	8
Sold two heifers, the laſt year's yearlings, for	- 7 0 0			
Valued, *&c.* at then	- 3 10 0			
		3	10	0
		24	15	9
Expences	- - -	5	14	10½
Profit, about four pounds fifteen ſhillings *per* cow	- - - -	19	0	10½

I think theſe two accounts (not calculations) muſt be ſatisfactory. It will, doubtleſs, be obſerved, nothing is yet ſaid of hogs in the above. I have reckoned nothing for all the ſlet milk, and whey: theſe were given hogs.

I ſhall now add ſome obſervations, which I had annexed, to the account of cows for 1763, as follows.

There are ſome very material obſervations to be made on this account. Is four pounds three ſhillings the value

of a cow's feed for a twelvemonth? Surely not. Two ſteers, or heifers, may be kept and fatted in the place of one cow: theſe will undoubtedly pay better.

I am aware of the objection, that a dairy is never ſuppoſed to anſwer well without a good dairy-wife to do all the buſineſs of it. This certainly makes a material alteration: but four pounds a cow is, in this neighbourhood, thought pretty near the profit of one. Yet it muſt be evident, if there was no further conſideration, a dairy muſt be attended with conſtant loſs: this conſideration is the advantage derived from the hogs, which evidently compoſes the *profit* of a dairy.

I am not yet able, from experiments, to aſſert how many hogs may be kept on a given number of acres without the aid of a dairy: this is neceſſary to be known before the exact profit of cows can be aſcertained. The ſpring litters ſtand greatly in need of the milk and whey, which is then coming

on; ſo that few, I doubt, could be bred at that time of the year without them. It is neceſſary here to ſay ſomething concerning them.

EXPERIMENT. 1763.

Food and Produce of a Sow, and the Pigs bred by her, in a Year.

She pigged in *April* ſeven pigs, and in *October* eleven.

EXPENCES.

1763.	*l.*	*s.*	*d.*
Nov. 18, &c. For grains - -	0	10	4
Cutting a litter - - -	0	1	6
Dec. 8, and Jan. 21. Ten coomb of peas - - -	5	1	0
Expences on ditto - -	0	1	0
For ten buſhels of barley - -	1	0	0
Feb. 17 and 25. Expences in felling -	0	11	6
For two coomb and two buſhels of peas - - - -	1	6	3
	8	11	7

PRODUCE.

Oct. 30. A pig - - - -	0	2	3
A fat hog - - - -	1	9	0
A fat hog, one hundred and ten pounds weight - - -	1	12	9
Carry over	3	4	0

	l.	s.	d.
Brought over	3	4	0
Feb. 17. Ditto, one hundred and ſixteen pounds weight, at four ſhillings and ten-pence *per* ſtone -	2	0	0
Heads, &c. - - - -	0	5	3
Feb. 22. Three fat hogs, ſold alive -	6	7	0
One ditto, at four ſhillings and ten-pence *per* ſtone - -	2	0	0
Ten live pigs, carried to next year's account, valued at - -	4	16	6
	18	12	9
Expences - - - - -	8	11	7
Profit - - - - -	10	1	2

The dairy this year was four cows: all the whey and flet milk was thrown into the hogs ciſtern, together with the diſh-waſh and offal of the kitchen, and the grains of about twenty coomb of malt uſed in the family, beſides which, thirteen coomb more I bought for them: all this compoſed their common waſh while lean: for three months in the ſummer, the ſow and the ſeven pigs ran in clover. Theſe articles, beſides common graſs, (on which, by the by, they feed as well as ſheep) were all their lean food.

Now,

Now, from the above account muſt be deducted the value of the clover-feed, as that certainly was not from graſs ground, and may be eſtimated. Such deductions I have no objection to, as we may come near the mark in valuing: the preceding calculation, however, does not require them, as the twenty acres were to have been an addition to a farm, not one by itſelf.

	l.	*s.*	*d.*
Seven hogs, at fourteen-pence *per* week, for three months, come to - -	0	14	0
Thirteen coomb of grains - -	0	10	4
	1	4	4

EXPERIMENT. 1764.

Food, Produce, &c. *of Hogs a Year, maintained by a Dairy of four Cows.*

The old ſow pigged in *April*, eleven, and again in *November*, twelve; the young one ſeven, in *January*, 1765.

EXPENCES.

1764.	l.	s.	d.
Ten pigs, from laſt year's account, to be reckoned here - - -	4	16	6
For eighty coomb of grains - -	2	15	8
For fourteen coomb of pollard - -	1	12	5
For a young ſow and boar - -	1	4	0
For two buſhels of oats - -	0	4	0
For tail barley - - - -	0	14	3
For ſix buſhels of barley - -	0	14	3
For one hundred and twenty buſhels of turneps, and five buſhels of cabbages; ſay one hundred and twenty-five buſhels of turneps - -	0	6	0
N. B. My crop of turneps this year produced eight buſhels *per* rod (their root and top cut off): one hundred and twenty-five buſhels is therefore ſixteen rods, which, at two pounds two ſhillings *per* acre, the price this year, comes to four ſhillings; but I have ſaid ſix ſhillings.			
Sundry expences - - - - -	1	5	4
	13	12	5
Three months feed in clover - -	0	12	0
	14	4	5

PRODUCE.

Aug. 22. Sold eleven pigs, lean, for -	5	15	0
Nov. 13. Sold nine lean - -	12	3	0
Carry over	17	18	0

			l.	*s.*	*d.*
	Brought over		17	18	0
March 25. Value of ſtock carried to next year (the old ſow excepted) *viz.* the young ſow (one of the ten) with ſix pigs	2	12 6			
Twelve pigs - -	5	8 0			
A little ſow with pig (bought May 19.) -	1	5 0			
The boar - - -	1	1 0			
			10	6	6
			28	4	6
Expences - - - -			14	4	5
Profit - - - - -			14	0	1

Before I make any obſervations on this account, I ſhall explain the price I charge for clover-ſeed.

I am enabled to do it very clearly this year, as I had none of my own, but hired a field of two acres and three rood, at one pound thirteen ſhillings *per* acre, from *May* to *Michaelmas*. I hired it purpoſely for my horſes, but kept the ten hogs in it for three months.

The price of the clover was four pounds ten ſhillings and ſix-pence. The cattle it fed were

Five

Five horſes, three months;
Ten hogs, three months;
Thirty-eight ſheep and lambs, one month;
Two heifers, two months.

The common price of joiſting a horſe is one ſhilling and ſix-pence *per* week in clover; but that I may raiſe the price for the hogs, I will reckon the reſt of the cattle as low as poſſible.

	l.	*s.*	*d.*
Five horſes, ſay at three ſhillings and ſix-pence *per* week, for three months	2	2	0
Thirty-eight ſheep and lambs, at two-pence *per* couple, for one month -	1	5	4
Two heifers, at three-pence *per* week each, for two months - -	0	8	0
The hogs - - - - - -	0	12	0
	4	7	4

This comes as near the truth as any calculation I can make; and I can every year, by hiring clover, keep my hogs as cheap as this, without any aſſiſtance from arable land of my own.

The chief remark to be made on theſe experiments is, that the profit on hogs, in a dairy farm, is very conſide-

rable.

rable. The food here ſpecified, and which did not come from the dairy, is no impeachment of this aſſertion; becauſe the direct enquiry is, What ſtock of hogs ought to be aſſigned to a given number of cows? That is, how many litters of pigs will the cows maintain? It being greatly advantageous to keep the full number, and, if neceſſary, to purchaſe other food, as we have ſeen; and ſuch expences deducted from the produce, the remainder belongs to cows, ſince without them the pigs could not be reared.

Of the Improvement of wet Paſtures.

AS I have, within a few years, not only had ſome experience in my own farm, but obſerved the methods employed by many neighbouring gentlemen and farmers in mending their paſtures, I ſhall communicate a few of my remarks on the improvement of wet paſtures; a ſubject which may prove, perhaps, of ſome little utility, as I ſhall ſpeak of nothing but what I have either performed myſelf, or ſeen in my neighbourhood.

The particular lands of which I ſpeak are looſe, woodcock, brick-earth ſoils for about eighteen or twenty inches, and under that, clay to a great depth.

Some that I have improved myſelf were exactly level, ſo as to be quite poiſoned with the wet, which could not drain off.

From the beſt obſervations I could make on many experiments, the following is the method which anſwers beſt

beſt to improve them. I ſhall alſo give you the expence with us.

The firſt thing to be done is, to make large, deep ditches round every field, and, if the fields are large, to divide them into ſmaller, of five, ſix, or ſeven acres each, by new ditches: nothing is attended with a more ſudden improvement of all the ground near the borders of the fields, than good ditches.

I generally make mine ſix feet perpendicular deep, ſeven wide at top, and three at the bottom. I never pay for them by the rod, (which is cuſtomary) but give two-pence half-penny *per* load, of thirty buſhels, for all the clay, *&c.* that is thrown out of them, and two ſhillings and ſix-pence a ſcore loads for filling and ſpreading it.

Theſe ditches ſhould be made in ſuch a manner that no water can remain in them, but a deſcent from one to another to carry it quickly off.

It may be eaſily imagined how much theſe muſt drain the land, beſides the quantity of excellent manure (clay)

which ariſes out of them. Add to this, the great convenience of having ſuch fences about a farm, that the farmer is ſure to find his cattle wherever he turns them, inſtead of their breaking perpetually into his corn or hay fields, which, in multitudes of farms, is ſo often the caſe: it is ſometimes the work of a boy, only to be hunting after hogs and ſheep that go aſtray for want of good fences.

In the banks of new ditches we always lay white thorn, fifty roots to a rod (the workmen are allowed ſixpence *per* hundred for gathering them;) but I always avoid intermixing any thing with it, eſpecially haſel, for in the nut ſeaſon fences are pulled in pieces for the fruit by all the boys and girls in the neighbourhood; and oak, aſh, *&c.* only give an opportunity to get over the hedge with greater eaſe. Sallow, willow, elder, *&c.* are to be avoided in the hedge, or by way of hedge-ſtake for the dead hedge, as they grow ſo faſt as quite to overſhadow the quick, and even deſtroy it. After frequent

quent cuttings, to render the plants thick and ſtrong, I keep the quick regularly clipped, which, in a few years, renders the fence impenetrable to man or beaſt, conſidering the largeneſs of the ditch.

If an old fence is grown bad or thin, or compoſed of improper plants, I never yet obſerved it improved by planting quick in the gaps: the beſt way is, to reverſe the bank, and plant freſh quick.

One advantage ariſing from good fences is not apparent at firſt ſight. To the diſgrace be[illegible]t ſpoken of moſt of the gentlemen of large fortunes in this neighbourhood, the game is wretchedly deſtroyed by poachers, who take it with night-nets. Theſe vermin, who are generally labourers, ſwarm in every village round me. Their method is this: they take the farmer's horſes out of his fields, and, after their doing a hard day's work, ride them all night, as faſt as they can make them go, over the ſtubbles, to catch the partridges, blundering over every hedge (except

ſuch as I have deſcribed) in their way, oftentimes ſtaking the horſes (of which two inſtances have I ſeen this ſeaſon) making gaps in the fences, riding over ſtanding corn, clover for ſeed, or any thing that is a cover for birds, and, after damaging the farmer in a moſt ſhameful manner, carry the produce of their infamous labour to many, who, to their great diſhonour, encourage theſe raſcals for their convenience. The money they get is ſpent at the next ale-houſe, and, inſtead of doing the farmer a good day's work, they are drunk, aſleep, or idle, the whole day.

Now there are very few farmers horſes that will leap a gate; but moſt will plunge through ſuch hedges as are common hereabouts: none could paſs ſuch ditches as I always make and recommend. A farmer in this pariſh has ſo effectually fenced in his fields with prodigious ditches, that I have heard him declare, that not a ſingle night-netter has been on his grounds on horſe-back; and were they to attempt it, they would loſe more time in paſſing

paſſing one ditch than was neceſſary to drag ſome whole farms.

The pernicious effects, to farmers, of this abominable practice, are notorious, and cry aloud for redreſs: if they would eaſe themſelves, I know of no way but ſuch ditches as I have deſcribed.

But to return.

When the ditching is done, the next work is to land-drain the whole fields in ſuch a manner that every part of them may be laid dry. In a paſture of ſix acres I did two hundred rod. If there is the leaſt fall in any part, or any place more wet than others, the drains ſhould be cut through them. If the ſurface is exactly level, the depth of the drains ſhould vary, ſo that the water may every where have a deſcent.

Theſe drains are made here, in general, thirty-two inches deep, twenty inches wide at top, and four wide at the bottom. They are filled eight inches deep with either ſtones or wood; but I ſhould ever recommend the former, as the moſt effectual and laſting, to

thoſe who are not deſirous of ſaving the difference of the expence. However, I know many fields in this pariſh and neighbourhood that are drained with wood, and which anſwer extremely well; and I have been aſſured that they will laſt twenty or thirty years. Nay, in ſome parts of *Eſſex* I hear they do it with ſtraw alone; but this muſt be of ſervice for only a few years: if ſtone be uſed, there can be no doubt of its laſting. The labour of the whole is three-pence *per* rod.

If with ſtone of the farmers, a load of thirty buſhels will do three rods, which coſts one ſhilling and a half-penny ſtubbing and picking; ſo the expence of a rod is ſeven-pence, beſides carriage of the ſtone, which will not be much: but if he buys his ſtone, as is much the moſt probable in this country, we may ſuppoſe he muſt go two miles to fetch it, and give a ſhilling for eighteen buſhels ready picked: the carriage is worth a ſhilling more, and reckoning the eighteen buſhels to do a rod and half (which is near the

matter) the ſtone of it will coſt *per* rod one ſhilling and four-pence.

If buſhes are uſed, a load of forty faggots will coſt, if he buys them, or be worth, if he has them, five ſhillings, and coſt cutting one ſhilling. They will do ten rods; ſo that the whole expence of doing a rod with them will be ten-pence, and of ſtone one ſhilling and ſeven-pence.

The very firſt year the prodigious advantage of theſe drains appears, eſpecially if the ſeaſon proves wet. The graſs (or corn if in ploughed fields, for it anſwers in all) will be freſh, vigorous, and ſweet, wherever the paſtures are drained.

I have a field of ſix acres (mentioned above) which by land-draining, ditching, and manuring, is an exceeding good paſture, and has produced two tons and ten hundred weight of hay *per* acre, in a very good year, and generally thirty-five hundred weight *per* acre; whereas the paſtures adjoining are ſcarce worth the farming, and let but at ſeven ſhillings *per* acre, producing ſcarce any thing but a little feed

for lean cattle. The ſoil is the ſame in both; the ſix acres, about twelve years ago, being full as bad as the reſt.

To improve ſuch wet land, nothing can be more advantageous than the clay which is thrown out of the ditches. Eighty loads *per* acre is the quantity I have laid on, and have been told by ſeveral ſenſible farmers (who clay a good deal) that it is a proper covering; but if nothing is mixed with it, ninety-five or one hundred. I know a piece of graſs land greatly improved, on which were ſpread one hundred and fifty loads.

My method is to make a large hill of manure, by firſt laying a quantity of clay regularly on a heap; then placing a thin layer of muck, ſuch as I have, upon it, either my ſtable or rack-yard dung, or bringing it of any kind in my waggon from the neareſt town; on this layer, another thick one of clay; then the ſecond of dung, and ſo on; letting the proportion be about twenty loads of dung to fifty of clay. Theſe heaps, after remaining ſix months without

without ſtirring, I mix well together by turning them over, which a workman will do at the rate of eight ſhillings for one hundred loads. Let it lie ſix months longer in this ſtate, and then carry it on to the land, paying two ſhillings and ſix-pence *per* ſcore loads for filling and ſpreading. This I take, from experience, to be by much the beſt way of manuring with clay, as it works and impregnates the ſoil much ſooner than alone.

Whenever I clay arable land, I do it on clover paſtures after the crop of corn is off, managing it in the ſame manner as for paſtures. If it is ploughed in directly, it is ſeveral years before it works; but having a winter and ſummer to diſſolve and powder it; it waſhes into the ſoil more equally, and in a properer ſtate for improvement.——

Theſe are the principal points to be obſerved in improving ſuch wet, cold, looſe paſtures as I have deſcribed: ſome that I have quite changed by theſe means were half over-run with moſs

and

and ruſhes; but draining them thoroughly, and claying them, kills all rubbiſh of this ſort, and preſents the farmer with ſo admirable a view of good paſture for dairy or grazing, where ſo lately nothing could live, as is to be equalled in ſcarce any thing of the kind.

But as all improvement ceaſes to be ſuch when more money is ſpent in it than the advantages will repay, I ſhall in a few words diſplay how far this is from being the caſe here. I will ſuppoſe two or three fields are improved, amounting in the whole to twenty acres.

	l.	*s.*	*d.*
Sixty loads of clay *per* acre thrown out of the ditches, twelve hundred loads, at two-pence half-penny *per* load -	12	0	0
I will ſuppoſe ſixty rod of new ditching done, which, before clay is thrown out by the load, will coſt one ſhilling *per* rod - - - - - -	3	0	0
Three thouſand quickſets, at ſix-pence *per* hundred - - - -	0	15	0
Land-draining ſeven hundred rod with buſhes (this is the quantity I have now marked out in a field of twenty acres) at ten-pence *per* rod - -	29	3	4
Carry over	44	18	4

	l.	s.	d.
Brought over	44	18	4
N. B. I had a great part of my laſt crop of barley killed in this field with the wet; I had therefore a fine opportunity of marking exactly where the drains ſhould be made, which ought, on ſuch occaſions, never to be omitted, were it only for the common water-furrows which are made for every crop. In ſome fields, unleſs ſuch a guide offers, it is very difficult to tell exactly where to make the land-drains.			
Turning and mixing one thouſand ſix hundred loads of manure - -	6	8	0
Filling and ſpreading one thouſand ſix hundred loads, at two ſhillings and ſix-pence *per* ſcore - - -	10	0	0
I will ſuppoſe that the work may be done the ſooner if the farmer brings one hundred loads of the four hundred of dung from the neareſt town; and as I have not reckoned the horſes and driver for the clay cart, I ſhall not in the bringing the dung: therefore the expences *per* waggon-load will be, the coſt three ſhillings, boy ſix-pence, and turnpike ſix-pence. A waggon-load is two tumbrel-loads (in this country) ſo fifty loads, at four ſhillings, are -	10	0	0
Total	71	6	4

This is three pounds eleven ſhillings and three-pence *per* acre: and ſuppoſing the profit to laſt but twenty years, although

although the draining and ditching part will laſt twice that time, and the clay five and twenty as good as at firſt; and the farmers hereabouts ſeldom change their farms, if tolerable ones, living in them their lives, and their ſons after them, with leaſes of ſeventeen, twenty-one, and twenty-five years: ſuppoſing twenty years profit, I ſay, the expences will then be, *per* acre *per annum*, three ſhillings and ſix-pence half-penny.

So ſmall is the expence divided. But now let us conſider the profit.

Such land as I have deſcribed never lets here for more than ten ſhillings *per* acre, by far oftener for eight ſhillings, or eight and ſix-pence; and it is from my own experience, as well as various obſervations, that I aſſert the ſame land, after the improvements, will let to any tenant for ſeventeen, eighteen, and twenty ſhillings *per* acre.

I will ſuppoſe it only ſixteen ſhillings, though I am certain that is conſiderably under the mark: he then gains, in point of rent, ſix ſhillings *per* acre; and

and the whole calculation is abſurd, if we do not add his whole proportional profit on the acre: ſuppoſing his profit on it before improvement was a rent, ten ſhillings; afterwards, it will undoubtedly be the ſame, at leaſt; which adds ſix ſhillings more to the profit; ſo that the whole will be twelve ſhillings *per* acre *per annum*, or eight ſhillings and ſix-pence clear, after the improvement is paid.

	£.
Twelve ſhillings *per* acre is *per annum*, for twenty years - - - -	240
Expences of improvement - - -	71
Clear profit - - - -	169

Or eight pounds nine ſhillings *per annum*: and if we reckon five *per cent.* intereſt for the ſeventy-one pounds, that is three pounds eleven ſhillings *per annum*, which, deducted from eight pounds nine ſhillings, leaves four pounds eighteen ſhillings *per annum* abſolute profit.

I think, I have ſtated the caſe of this improvement clearly; and I muſt repeat it, that I ſpeak from experience. The ſum to be expended

on

on twenty acres will appear large to moſt farmers, whoſe property is not conſiderable; but the proportion holds for a ſingle acre, and thoſe who cannot afford to improve twenty, may three, four, or five; and I make no doubt but ſuch as attempt it will find their account in it greater than I have ſtated it.

As I have mentioned a tumbrel-load to be thirty buſhels, and a waggon-load to be but two tumbrels, I ſhould obſerve that we carry away of muck fifty buſhels at a time in our tumbrels, and ſo agree with our men in proportion to the thirty-buſhel loads.

I have obſerved, that in making new ditches, or enlarging old ones, I ſeldom pay by the rod, but by the load: however, to thoſe who chuſe the former way, I would recommend that they have them worked by a frame of ſmall ſlit deal, nailed into the exact ſize of the intended ditch, and agree with the workmen to do their work by it: this will prevent diſputes which frequently ariſe.

Before

Before I conclude this ſketch, I ſhall once for all apologize for the inelegance of my language, and, perhaps, unneceſſary repetitions; but it appears to me that the *matter*, in eſſays of this nature, is infinitely more material than the ſtyle. Indeed it is almoſt impoſſible to attend with ſucceſs to the diction of a paper which contains a narrative of farming experiments, full of cramp, barbarous terms, equally diſagreeable and neceſſary: but one ſimple rational experiment is worth ten elegantly-flowing periods. The language of huſbandry a farmer may underſtand, but that of *ſtyle* is to them unintelligible as *Hebrew*.

Common Farmers vindicated from the Charges of being univerſally ignorant and obſtinate; with ſome Reflections on the preſent State of Improvements in Huſbandry.

I.

THE following hints, on the ſituation of common farmers, were occaſionally thrown together with intention to obviate the torrent of ridicule the new improvements in huſbandry let looſe againſt them.

The converſation in any company ſeldom turns on country buſineſs, but the common farmers are ſtigmatized with the appellations of *ſtupid fellows*, *prejudiced clowns*, *ſenſeleſs men*, who tread in the ſteps of their forefathers without the idea of improvement, who drudge on in the old road, rather like machines than rational animals. Much declamation have I heard of this ſort, and as I am a farmer myſelf, ſhall take this opportunity of vindicating,

in

in ſome meaſure, my brethren from aſperſions not always ſo juſtly founded as peremptorily aſſerted.

The horſe-hoeing huſbandry, the cultivation of artificial graſſes, the mowing of wheat, with many other new improvements, have found numerous advocates among gentlemen farmers: it ſhall now be my enquiry, whether the tenants do not act very wiſely in refuſing to meddle with experiments before the evidence of their ſenſes gives them hopes of ſucceſs.

In all the woodland country in my neighbourhood (I ſhall ſpeak only of what I have ſeen, and know perfectly well) the farms are generally ſmall, from twenty riſing to two hundred pounds a year, and here and there one of more; but in general they are under an hundred: and the land lets from nine to ſixteen ſhillings *per* acre.

It is pretty evident from hence, that no *fortunes* are to be made in them: a comfortable and decent living for the farmer and his family, and at his death

a hundred pounds, beſides his ſtock, is not very common among them.

In ſuch a ſituation, would they not be prodigious fools to meddle with all the faſhionable whims that are every day ſtarted in farming? The track in which they are, they know will produce ſomething: ſhould they leave it for uncertainties which may produce nothing?—Surely not.

Let the landlord try experiments, and I will warrant, if a few years prove them to anſwer, the tenant will adopt them. But men who have little money before-hand, and rent and expences regularly to pay, act very prudently in being only ſpectators of theſe new faſhions, till proof ſufficient is afforded of their ſucceſs.

The farmers I have talked with, are far from being the prejudiced people I have ſo often heard them repreſented; and many of them make no bad defence of themſelves for not adopting the ſchemes of the gentlemen farmers.

Men

Men who farm their own lands ought to be cautious in ſtigmatizing farmers, and ſhould firſt conſider whether their accounts are ſo clearly kept, that they can perceive profit ariſing from their farming when rent is paid, ſuppoſing they lived under another man; and ſhould alſo ſuppoſe they had no other caſh ever in hand than what aroſe from their farm: if this management is not clearly followed, it is wonderful impertinence to arraign common farmers for the narrowneſs of their views, when their own have not the extent to take in the fair compaſs of the queſtion; yet is this frequently the caſe.

I know ſeveral gentlemen who are apt to talk in the common ſtyle, and extol their own methods of huſbandry, which are calculated for the improvement of land, and the raiſing great crops.

Theſe are great; with them quantities of manure, frequent fallowing, *&c.* out-do all the neighbouring crops. Here is fund for converſation; but

where are the accounts? Let me ſee the expences. Could a farmer, who lives on his farm alone, ſupport it? Would he ſtarve with twenty coomb an acre on his land?

Material enquiries theſe; but, alas! too ſeldom to be anſwered ſatisfactorily.

There is a medium in every thing. The farmers, I readily believe, are rather more backward in adopting improvements than reaſon, or, perhaps I ſhould ſay, education will allow. But, on the other hand, gentlemen and authors are yet more apt to adopt chimeras at once, and then rail at their inferiors for not being as raſh as themſelves.

Experiment is the rational foundation of all uſeful knowledge: let every thing be tried, but do not expect it of thoſe who cannot afford it: let the landlord play all imaginable tricks with his land; if out of the game of chance a lucky hit ariſes, the tenant's eyes will not be ſhut.

Many

Many experiments have I lately ſeen in this neighbourhood made at a conſiderable expence, and many more have failed than ſucceeded; not one do I know lately, that is yet ſufficiently eſtabliſhed in its credit, among even gentlemen themſelves, for the farmers, with any prudence, to adopt it. I ſhall inſert a few minutes taken of an unſucceſsful experiment or two.

II.

Mowing Wheat.

I SHOULD premiſe, that a common way with the farmers in this country is, to ſow their wheat on clover paſtures, only turning up the ſurface once; from whence it conſequently enſues, that the wheat crop is not ſo clean as when ſown on a fallow.

I mowed the half of eight acres, and reaped half, dividing the field in ſuch a manner as to give each method a fair proportion of the weedy and clean parts.

The moſt judicious farmers here generally cut their wheat a week before it is quite ripe, and leave it the longer in the field in ſhocks, that the corn may acquire a hardneſs, and the weeds have time to dry and die.

I laid each lot of wheat by itſelf, and have ſince thraſhed and ſold ten coomb of each: the reſult of my experiment you ſhall have in a few words.

That which was reaped was fit to carry in a week; that I mowed, was ſo full of weeds at the bottoms of the ſheaves, that, at the end of ten days, I could not carry it: if I had ventured, the ſweat in the barn would have ſpoiled it.

The twelfth night, ſo much rain fell (ſeveral ſhowers, ſlight ones, had fallen before, without damaging the wheat) as to be of prejudice to the corn: when a fortnight was elapſed, ſome of it was grown in the ſhock. At the end of ſixteen days, I got it into the barn, much out of humour with my experiment.

When

When I came to thraſh, that which was reaped coſt me one ſhilling and ſix-pence *per* coomb; the other, two ſhillings and ſix-pence; a very fair difference, I am convinced, conſidering the length of the ſtraw, and the quantities of weeds. Weeds there muſt be more of than in the other method, as they reap quite over moſt of them.

At market I ſold the reaped wheat at one pound *per* coomb, and the mown at ſeventeen ſhillings and ſix-pence. Here I ſhall cloſe the compariſon: if the value of a little pipy hard ſtraw, and the ſaving in a ſlovenly expedition, are ſuppoſed to pay me two ſhillings and ſix-pence *per* coomb, by all means let the practice advance: for myſelf, I ſhall be much more inclined to reap my oats, than mow my wheat.

III.

Lucern.

I FALLOWED and ploughed two acres of light gravelly land till it was

clear of weeds: this is the ſoil Mr. *Miller*, in his *Gardener*'s *Dictionary*, ſays is moſt ſuitable to it; I therefore choſe it in preference to ſeveral other kinds in my farm.

I ſowed it in his manner, twelve pounds to the two acres, in drills three feet from each other, the beginning of *April*. The weather was favourable, and the plants came up tolerably well and regular.

During the whole ſummer I kept the ſpaces between the rows quite clear of weeds with hand-hoes, and gave it two ploughings, turning the land up to the plants.

The hoeing was a very conſiderable expence to me; nevertheleſs I was determined to give the plant a fair trial, therefore did not let the weeds riſe at all.

After all the trouble I had with it, and the raillery I met with from the neighbouring farmers, I was rewarded, about the beginning of *September*, with three hundred of lucern hay, the value

of

of which did not a twentieth part pay even the hoeing of the crop.

The plants died away, and but few put out their leaves again in the ſucceeding ſpring.

I ploughed up the land, and ſowed it with white oats, the largeneſs of which crop made me ſome amends for my diſappointment, as I do not doubt having fifteen coombs *per* acre when they are thraſhed.

As I laid no dung on the land, I attribute this extraordinary crop to the frequent hoeings.

Any perſon who has read the article *Medica* in *Miller*'s *Dictionary*, and Mr. *Rocque*'s *Short Treatiſe on Lucern*, will perceive the methods to be diametrically oppoſite, as well as the opinions of the proper ſoil. It is to be regretted that authors, who write on gardening and huſbandry, will not keep within their due bounds, and not ruin their compoſitions by vain attempts at univerſality.

Since the trial I made of this graſs myſelf, I have heard of ſeveral perſons

who have been equally diſappointed with myſelf, in following *Miller*'s directions; and alſo of two or three, who have ſown lucern in Mr. *Rocque*'s method, on a rich mould, who have ſucceeded the firſt year very well, but with ſome doubts whether the crop will laſt.

If the deſcription I have heard of lucern, and its excellencies, is true, it would be a moſt valuable acquiſition in all this country. Our only artificial graſs is clover, which we can very ſeldom turn cattle into before the tenth or twelfth of *May*, long before which time our turneps are gone; ſo, for want of ſome graſs which comes earlier, we are at a vaſt expence to feed our cattle, eſpecially if the ſpring proves cold.

To ſupply, in ſome meaſure, this want, I have generally, at *Michaelmas*, ſown a few acres of rye for feed in the following ſpring, and afterwards ploughed and prepared the land for turneps: and I propoſed trying cole-ſeed for the ſame uſe.

The

The ſummer-feed of clover lets here extremely well. This year I had not enough for my own uſe, and being obliged to hire five acres of a neighbouring farmer, I gave him thirty-five ſhillings *per* acre for the feed, from *May* the tenth to *Old Michaelmas-day*; and I have known to forty-five ſhillings given.—From theſe circumſtances it is extremely clear, that lucern, if it ſucceeded, would prove an object of great importance.

I have inſerted theſe two experiments, not as criterions from which to form a judgment, having ſucceeded myſelf with lucern otherwiſe managed, and been credibly informed, that mowing wheat has anſwered to others; but as a proof that both points will admit, in many circumſtances, of great doubt, and until thoſe doubts are fully removed, no one can ſtigmatize common farmers for being ſhy of experiments,

IV.

Of manuring Land at a large Expence.

THE following is an inſtance of manuring at a very large expence, which I am perfectly well acquainted with, and have long ſeen the effect, which is not, however, ſo certain but ſome neighbouring farmers diſpute it.

I inſert it as a proof, that even common farmers are not always backward to expenſive improvements.

A farmer, at the diſtance of about four miles from the neareſt town, has regularly, for many years, employed his team, and a ſtout waggon, in bringing manure from it.

I have brought many loads myſelf, though nothing in proportion to him. From what I have experienced, and from his account, the expences on each load are as follow :

	s.	*d.*
For a waggon-load of about one hundred buſhels of manure, either cinder-aſhes, old mortar, hog-muck, rotten horſe-muck, or cleaning of the ſtreets, *&c.* mixed, one load with another coſts -	3	0

	s.	d.
Brought over	3	0
A man and a boy a day (little time is to be ſpared after the horſes are cleaned and well looked after, and the manure unloaded) - - - - -	1	6
Turnpike - - - - -	0	6
The work is generally done at the moſt leiſure time of the year, moſtly in winter, when the farmers allow their man a ſtated quantity of corn and hay for their horſes when they do not work: they muſt have extraordinary, on account of the journey, a buſhel of oats, which, at ſix ſhillings *per* coomb, is - -	1	6
The loweſt that can be reckoned for chaff and hay, is - - - - -	1	0
The working the horſes in drawing ſo great a weight (frequently four tons, and generally three and a half) can ſcarcely be laid at leſs than one ſhilling *per* horſe (I am ſure I would not let my horſes at that rate) - - - - -	4	0
	11	6

In this account, nothing is reckoned for the wear and tear of waggon, harneſs, and horſes ſhoes (no trifling articles) and yet each load amounts to eleven ſhillings and ſix-pence brought home, beſides the after-expence of ſpreading it on the land. In appearance this can never anſwer: but no farmer

farmer in the country underſtands buſineſs better than this man, none grows ſuch great crops (for he is almoſt conſtantly manuring ſome field or other) and he is evidently and well known to be in a thriving condition.

He began with a very ſmall farm, and now rents above two hundred a year.

It may, however, admit of a query, Whether the above expences are not too great for the crops to repay?

Whether the money would not be better laid out in manuring with clay, which is to be had every where in this country? Our ſoils are, in general, either a loam, brick-earth, or wood-cock, and under them clay: we can have it thrown out of our ditches (by which means alſo our fields are drained) at two-pence half-penny *per* tumbrel-load of thirty buſhels, and filled and ſpread at two ſhillings and ſix-pence for every twenty loads.

Of Broad-Wheel Waggons.

AMONG the many improvements which are daily making in agriculture, and the inſtruments and machines employed in it, that of broad-wheel waggons is far from being the leaſt conſiderable, as they are equally uſeful to the farmer and the carrier.

Great, however, as the advantages are which attend the uſe of them, very few are built by farmers. I am informed that in *Kent*, and ſome other parts of *England*, they are coming into uſe; but in *Suffolk* and *Norfolk*, where there are many farms equal, if not ſuperior, to moſt in *England*, I know but very few uſed by farmers.

This is the more ſurpriſing, as the great convenience of them is evident and indubitable. Any farm that requires eight or ten horſes to cultivate it, is large enough to prove the advantages attending their uſe. If ſuch a farm is ſituated on a great road, and

within reach of a market-town, from whence manure may be brought, the ſaving by them is yet more conſpicuous.

I know, within a few miles, ſeveral ſubſtantial farmers, who keep from ten to twenty ſtout horſes, and are frequently carrying corn to the neighbouring towns: ſome of them bring large quantities of manure, at leiſure times, and cart-timber, or any other work, which carpenters, or others, can employ them in; but all is performed with narrow-wheel waggons, which, on our turnpike-roads, are allowed to be drawn by only four horſes.

The practice of the farmer, who brought manure at the expence of eleven ſhillings and ſix-pence *per* load, I ſhall conſider in the preſent caſe.

He keeps, I think, fourteen or fifteen horſes, ſix or eight of them ſtout enough for a broad-wheel waggon.

The common load of a narrow-wheel waggon is about twenty coomb of wheat, twenty-five coomb of barley, a ton and half of hay, and of manure about

about ninety buſhels. Theſe loads are pretty near the general practice, whether with four horſes in the turnpikes, or five or ſix in other roads. With corn, hay, planks, &c. two men are always ſent to attend each waggon, and a man and a boy when manure is the load.

I know but three farmers who uſe broad-wheel waggons, and only one of them to the greateſt advantage.

Eight horſes are always allowed to draw them, when they are nearly o aded.

None of theſe three farmers ever ſent more than two men with them, who can manage the eight horſes with nearly the ſame eaſe as five or ſix in a common waggon: the difference in trouble is but trifling. As to the load, the ſuperiority will be found to be very great in favour of the broad wheels.

But I ſhould premiſe, that when a farmer builds one of theſe waggons, he ſhould, by all means, remember to have very ſtout hanging-boards to fix occaſionally round it, projecting, about fourteen or ſixteen inches from the

buck, over the wheels, and the ends. When a waggon is built of a proper ſtrength, with plenty of irons, theſe projecting boards enable it to hold an immenſe load.

I have ſeen but one waggon, in a farmer's hands, built on theſe principles; and the loads it conſtantly carried were really ſurpriſing.

Such an one will hold two hundred and fifty buſhels of manure. Let us compare the ſaving in this article.

Between ninety and one hundred buſhels in a common waggon coſt eleven ſhillings and ſix-pence: the expence of two hundred and fifty in the broad-wheel waggon is as follows:

	l.	*s.*	*d.*
Two hundred and fifty buſhels of manure, at the ſame price as the other -	0	7	6
Two men a day - - - -	0	2	0
Turnpike - - - - -	0	1	0
Two buſhels of oats - - -	0	3	0
Chaff and hay - - - -	0	2	0
Uſe of the horſes - - - -	0	8	0
	1	3	6

From

From this account it is plain, that fifty buſhels of manure are gained by the uſe of the broad wheels, clear profit, every journey, or better than five ſhillings, according to the coſt of it the common way.

You will eaſily conceive how much this muſt amount to in a year, in thoſe farms where very large quantities are conſtantly brought. The farmer I mentioned takes almoſt every leiſure day to bring it, and has frequently two waggons at the work at the ſame time, loſing, in this manner, half a guinea a day, for want of a broad-wheel waggon.

In eighty loads, twenty pounds are ſaved clear; and ſeveral farmers I know take conſiderably above an hundred journeys in a year.

I ſhall next examine the ſaving in a load of wheat or barley carried out in a broad-wheel waggon.

I have known ſuch an one as I have deſcribed carry eighty coomb of corn at a time; but I will lay the load at ſixty coomb. The expences of carrying

out ſixty coomb of wheat, or other corn, in a common waggon, are

	l.	*s.*	*d.*
Two men two days each journey - -	0	12	0
Their allowance for expences on the road, each time ſix ſhillings - -	0	18	0
Three buſhels of oats for ſix horſes each time, two coomb one buſhel, at ſix ſhillings, is - - - -	0	13	6
Three fans of chaff each time, at four-pence *per* fan - - - -	0	3	0
One hundred of hay each time, at two ſhillings - - - - -	0	6	0
Uſe of ſix horſes, at two ſhillings and ſix-pence each *per* journey - -	2	5	0
	4	17	6
A common waggon brings a chaldron and half of coals, or fifty-four buſhels, for which the farmers receive twelve ſhillings *per* chaldron: in three journeys this is four chaldron and a half to be deducted from the expences - -	2	14	0
Remains total expence on carrying out ſixty coomb of corn - - -	2	3	6

The expence on one journey of a broad-wheel waggon, with eight horſes, will be as follows:

	l.	*s.*	*d.*
Two men two days - - -	0	4	0
Their allowance - - -	0	6	0
Carry over	0	10	0

	l.	s.	d.
Brought over	0	10	0
Four buſhels of oats - - -	0	6	0
Four fans of chaff - - - -	0	1	4
One hundred and a half of hay (this is more than the proportion, but I give the narrow wheels fair play in every article) - - - - -	0	3	0
Eight horſes, at half a crown each -	1	0	0
	2	0	4
Back carriage of four chaldron and a half of coals, or one hundred and ſixty-two buſhels, at twelve ſhillings *per* chaldron - - - -	2	14	0
Expences - - - -	2	0	4
Profit on each journey, by means of back carriage - - -	0	13	8

Whereas, in three journeys with the common waggon, there is a loſs of two pounds three ſhillings and ſix-pence, which makes two pounds ſeventeen ſhillings and two-pence profit on every journey with a broad-wheel waggon.

An important article this in a large farm, and highly worth the conſideration of thoſe farmers who uſe land enough to employ eight ſtout horſes.

Let us ſuppoſe a farmer to grow an hundred and fifty acres of corn in a year, and allow eight coomb *per* acre; no high calculation, if he is one that employs himſelf in purchaſing and bringing manure.

One hundred and fifty acres, at eight coomb *per* acre, are twelve hundred coomb, or ſixty journeys with a narrow-wheel waggon in a year, which, at two pounds three ſhillings and ſixpence loſs every three journeys, amounts to forty-three pounds ten ſhillings *per annum*.

Twelve hundred coomb are twenty journeys with a broad-wheel waggon; and, as I have above proved, that there is two pounds ſeventeen ſhillings and two-pence profit by every journey, the twenty amount in the year to fifty-ſeven pounds three ſhillings and four-pence, or above the price of one of theſe waggons, in a ſingle article in a ſingle year.

Many are the farmers which grow an infinitely greater quantity of corn than I have ſpecified; ſome, doubtleſs, much

much leſs; but it will be an eaſy matter to calculate the profit on any quantity; and it will prove very great, in proportion, in all farms that employ eight, or more horſes.

The ſame vaſt ſuperiority will be found in every article of employment to which theſe waggons can be put. They will carry three and four times the quantity of a common waggon of hay, ſtraw, faggots, planks, or other pieces of timber; and in each article the proportion of gain by their uſe will remain the ſame.

If we reckon only twenty pounds in a year ſaved in bringing manure, the clear profit on that, and carrying out corn, amounts to ſeventy-ſeven pounds three ſhillings and four-pence. If we calculate the ſaving at one hundred pounds for every article of work in the year, I am perſuaded it would not be above the truth, eſpecially if the farmer (as ſome few in this neighbourhood do) carts plank, and pieces of timber, or any thing elſe, for hire.

I ſhall now enquire into the reaſonableneſs of ſome objections which many farmers, I have converſed with on the ſubject, have ſtarted againſt the uſe of theſe excellent waggons.

They ſay a broad-wheel waggon is ſo huge and cumberſome a machine, that it cannot be uſed for any purpoſe in their grounds, no where but in good roads.

A very trivial reaſon for not having them, ſurely! A farmer who has eight or ten horſes, in all probability, has three waggons; many that I know have four, without renting very large farms. Two waggons, with narrow wheels, are abſolutely neceſſary for home buſineſs, and in many farms three, in ſome four. When no broad-wheel waggon is kept, they are built generally very ſtrong for road-work, to a much greater price than would be neceſſary if they were uſed only at home: here would be a great ſaving, in having the common waggons lighter built: and as one waggon in moſt

farms

farms is very ſtout for road-buſineſs, the difference would be no conſiderable ſum between that and a broad-wheel waggon.

I have now one with narrow wheels, which coſt me twenty-ſeven pounds: I can build one with broad wheels for fifty, complete in every reſpect: the extraordinary expence, therefore, would be only twenty-three pounds. But to anſwer all doubts, I will ſuppoſe the farmer muſt keep the ſame number of common waggons, and the whole fifty pounds expended extraordinarily. Let any one of common ſenſe judge if ſuch a purchaſe would not anſwer, were the twenty pounds *per annum*, ſaved in bringing manure, the only profit ariſing from it. The anſwer is plain and evident. How much more advantageous is it then, when ſeventy or an hundred pounds a year is the gain by having one?

I have heard ſome other objections made to their uſe, but all ſo extremely trifling, that it is needleſs to take the trouble of anſwering them.

A broad-wheel waggon will go in any quarter-road, and to moſt towns in *England*, of any conſideration, even where there are no turnpikes, roads good enough for theſe carriages, lead. But in the country, of which I more particularly ſpeak, *viz. Suffolk*, exceeding good roads are every where met with, and in moſt places better for quarter carriages than narrow-wheel waggons.

Load eight horſes in a broad-wheel waggon with three times the weight which four horſes will carry in a common carriage on our turnpikes, and they will perform their journey with far more eaſe to themſelves than the others; and in other roads, where a narrow-wheel waggon is jolted, and almoſt racked to pieces in deep ruts, a broad-wheel waggon will carry, with eaſe to the horſes, and not half the tear of irons, *&c.* three times the weight which ſix horſes can draw in one with narrow wheels.

The breadth of the wheels gives a ſteadineſs to the whole machine, and

enables

enables it to roll along without thoſe violent jolts which ſo greatly encreaſe the fatigue of drawing narrow wheels; and their not cutting into the ground ſuch deep ruts, muſt indubitably eaſe the draught to a great degree.

Reaſons

Reaſons why Farming ſo often proves unprofitable.

WHEN I began farming, I was warned from expecting profit, by two different ſets of people; Firſt, by gentlemen, who aſſured me nothing was to be made by it, but much, probably, would be loſt, if I had rent to pay; ſince few, who even farmed their own land, could do more than make their rents, and keep their horſes, by their farms.—Secondly, the farmers, who have a mortal antipathy to what they call gentlemen farmers, and are ſure to laugh very wiſely at thoſe who pretend to know any thing of the matter, treated my idea of attempting it without *loſing* money, as ridiculous.

No great encouragement this to begin; but my inclination to a country life, and my averſion to the mere idle enjoyment of it, overcame theſe prudential cautions; and I engaged in farming, with the expectation of, at leaſt,

leaſt, *loſing* nothing by it. An indolent practice of buſineſs was not my ſcheme: thoſe who would purſue farming to advantage, ſhould adopt the ſentiment of *Statius*:

—— *Steriles tranſmiſimus annos,*
Hæc ævi mihi prima dies, hæc limina vitæ.

Whenever the buſineſs of huſbandry is followed with attention and induſtry, I am very well convinced it will prove profitable, barring particular exceptions: but there is ſcarce any purſuit in which more money may be loſt, through ignorance or negligence.

The rent of a farm is a very material article, though not in this country ſo often the cauſe of a want of profit, as commonly imagined.

In ſome parts of *England*, I know the rents are ſcrewed ſo high, that the tenants are little better ſituated than day-labourers: but this is not the caſe in *Suffolk*; rent does not bear ſo hard on the farmer as his ſtanding expences.

Men of tolerable experience, who have ſeen any parcel of land at different ſeaſons of the year, will judge pretty exactly what rent it is worth; and, except in very little farms, the property of people in low circumſtances, I know but few inſtances of a want of ſucceſs, owing merely to the rent.

The reaſon is frequently thrown on it: but a near examination generally diſcovers ſome bad management, or accidental circumſtances, to which a failure may be attributed, as well as a high rent: however, ſome exceptions there muſt be to the beſt-founded aſſertions.

The ſtocking a farm is a point of great importance, and requires as much judgment and foreſight as any other point in huſbandry.

The bad ſucceſs of great numbers is owing to their not having a ſufficient ſum of money to begin with, which inevitably involves them in difficulties, and reduces their profit on every arti-

cle of their produce. Their farms are under-ſtocked; they ſell at a conſtant diſadvantage; their fields are not half cultivated; and in a ſhort ſeries of years, unleſs ſome lucky hit ſets them up, they grow poor, in ſpite of all poſſible induſtry, judgment, and application.

Even a low and eaſy rent will ſeldom remedy the want of money at ſetting out.

The want of judgment, in proportioning the quantity of each particular kind of ſtock to the quantity and nature of the lands of a farm, is alſo attended with great loſs.

For inſtance; if a farm requires four horſes, or two ploughs, and the farmer keeps only three, or a plough and a harrow, his fields cannot be ſufficiently cultivated, even according to the ideas of culture common among farmers; and, of courſe, in a few years his lands muſt be in very bad order, to his great annual loſs.

On the contrary, to overſtock himſelf with horſes, is to keep what will inevitably

inevitably eat him out of houſe and home: the expences attending them are very great, and if they are not kept conſtantly at work, their owner muſt neceſſarily loſe by them. But it will not be amiſs to explain myſelf more particularly on this head.

I am ſpeaking at preſent of the practice of farmers, ſome of whom overſtock themſelves with horſes, without giving their lands extraordinary ſtirrings on that account. If a farm, which commonly requires three horſes, has four kept, and is conſequently ploughed and harrowed proportionably more, the farmer will be no loſer by his fourth horſe; but the caſe is very different when he is kept without being worked to the beſt advantage of the farm.

It is not to be at once perceived how much is loſt by not having the number of horſes proportioned to the land; nor can this always be done.

A farmer may find it neceſſary to keep four horſes, and when he has got them, it is a chance but he could perfectly

fectly well manage ſeveral fields more with them; and when a man has an opportunity of hiring additional fields, then ſhould his judgment come into play, to take no more than his old ſtock will manage to advantage, unleſs he has a ſum of money ready to make an addition to it.

The ſame ill conſequences attend either over or under-ſtocking a farm with all other cattle: and it would be to the farmer's advantage was he always to remember, that three beaſts, of any kind, well fed, pay better than four without their bellies full. On the contrary, not to keep the ſtock neceſſary, is to ſubmit to a conſtant loſs. Both theſe ſorts of conduct are frequently followed, to the great unprofitableneſs of farming.

The proportion of the paſture and arable lands of a farm is of great conſequence towards the occupier's making a profit of his buſineſs.

I have already ſhewn how much more advantageous the former are than

the latter; nevertheleſs many farms have ſcarcely any graſs, and others none at all: the contrary fault, of having too much, never came yet within my obſervation.

The unprofitable practice of ploughing up paſtures, and not laying them down again, which is ſo univerſal in this country among farmers, whenever their landlords will allow it, tends perpetually to impoveriſh them. They are all to a man, mad after ploughed lands, and would willingly break up every acre of graſs in their farms.

So general an opinion among them would make one think the practice really profitable; but the contrary appears beyond all contradiction to be the truth; I mean, according to the culture at preſent purſued in this country.

Two thirds of the land of a farm in a rich country ſhould be graſs; and a little one had better all be ſo. The vaſt expences of the plough, without doubt, keep many farmers poor, who,

if

if their farms were graſs, would not run half the hazard, and enjoy a much better income.

Particular points of bad management, for want of ſenſe or knowledge, through ſlovenlineſs, idleneſs, or other obſtructions to any profitable huſbandry, are not what I mean to ſpeak of here, ſince they are ſo very various, and ſo totally ruinous, that no reaſoning can be concluſive, unleſs all ſuch exceptions are made.

The improper quantity of land in a farm is often againſt the farmer's profit.

Very large tracts, of two or three thouſand acres, which are common in *Norfolk*, are too extenſive for one farm. It is impoſſible for one man to cultivate ſuch a quantity of land well: much of it muſt be neglected, and but little perfectly managed.

Great profit indeed ariſes from moſt of theſe farms; but they take a very large ſum of money to ſtock and manage them properly.

Very ſmall ones, unleſs the farmer does the whole buſineſs himſelf, are equally liable to objection. The medium, which is ever, in proportion, the moſt profitable, is that quantity of land which will admit of being ſtocked and farmed without the want of either any addition or diminution. What I mean is this:

Let us ſuppoſe a farm to conſiſt of ſeventy acres of land, twenty of them graſs, and the reſt arable, in a rich country, the land from ten to ſixteen and ſeventeen ſhillings *per* acre; the occupier muſt keep one ſervant, and if he does not work hard himſelf, one labourer all the year, beſides ſome additional help at buſy times.

I know there are many ſlovenly men, who cultivate (if their management deſerves that name) ſuch farms with fewer hands than I have mentioned; but their conduct can be no rule to good farmers. Four horſes are alſo neceſſary for ſuch a farm.

Now, for the ſame ſtanding expences of ſervants wages, horſes, *&c.* the ſame

number of ploughs, harrows, tumbrils, waggons, *&c. &c.* one hundred acres, or better, might be farmed with the ſame proportional profit: in this caſe, therefore, the tenant of ſeventy acres loſes conſiderably for want of thirty or forty more. Indeed we ſeldom meet with a farm nicely proportioned to the ſtock on it.

There are many very evident reaſons why farming ſhould prove unprofitable to gentlemen who undertake to cultivate a part of their eſtates, whether for their amuſement or convenience, or, generally ſpeaking, even for profit.

A very fine *Norfolk* farm, of a large extent of country, the rent exceeding low, and a gentleman willing to be at the expence of marling, in ſuch a caſe, there is no fear of conſiderable profit, even without perpetual attention: but in common farms, in rich countries, no profit can ariſe to any gentleman that does not give the buſineſs conſtant attention, and deſcend to *minutiæ*; which may be too diſagreeable for him to ſubmit to.

What I mean by profit, is not making the rent which he might receive from the tenant without trouble, and without hazard, but that additional ſum which is the farmer's profit after his rent and all expences are paid. This is ſcarcely ever made by gentlemen, who farm either for convenience or amuſement; and, excepting graſs grounds, I am perſuaded they loſe conſiderably by keeping land in their hands. The plea of growing enough for family uſe of wheat, oats, *&c.* is a miſtaken one; they had better by far buy every article, than have any thing to do with the plough.

When I am told that farming anſwers to gentlemen, who I know do not give the *farmer*'s attention to the buſineſs, I never believe it, or, at leaſt, am perſuaded that no regular accounts are kept. It will not be difficult to produce ſome good reaſons for this incredulity.

It ſhould be remembered, that the farms which gentlemen keep in their own hands are ſeldom above fifty, ſixty,

ty, ſeventy, or an hundred a year, and not often ſo much. It is no eaſy matter for a farmer, with induſtry, ſobriety, and application, to make above a rent profit in ſuch a farm; and I believe but ſeldom ſo much. This is with every advantage of underſtanding his buſineſs, applying cloſe to it, and doing ſome work (if his farm is ſmall, a great deal) himſelf: how unlikely is it therefore that a gentleman, who may probably want theſe advantages, ſhould make near that profit, or, indeed, any at all!

In the firſt place, a principal part of his buſineſs, his buying and ſelling, is tranſacted by his bailiff, or head ſervant, who muſt be paid for his trouble. He may be lucky enough to meet with an honeſt one; but I would never adviſe any one to let the profit of his farming depend on the honeſty of other people. Suſpicion, to the open generous mind, is irkſome and grating: but the farmer ſhould ſet out with the maxim of Deſcartes—to doubt of his

very exiſtence, and ſuppoſe every man a knave till he finds him honeſt.

But there are many inconveniences, beſides theſe, in truſting to bailiffs.

The gentleman we muſt certainly ſuppoſe to be ignorant of farming; and he is then, of courſe, in danger of having an ignorant ſervant, without the ability of detecting him. However, the ſingle expence of a bailiff, or a *head* ſervant, which are much the ſame, is too great to be kept conſtantly for a ſmall farm; and in their abſence the gentleman muſt depend on himſelf.

This is palpably no dependance at all; for can it be expected that he will forego his diverſions, his excurſions of pleaſure, the company of his friends, the joys of ſociety, to attend his farm? I could almoſt as ſoon believe, that his wife would renounce an opera or a ball for the pleaſure of dancing attendance on her butter and cheeſe in the dairy. The rural joys of romance are pretty much out of date now; and, alas! there is great difference be-

tween

tween the employment of a farmer's wife in *England*, and keeping ſheep on the plains of *Arcadia*.

To return:

There are, even in a ſmall farm, a thouſand objects which require conſtant attendance.

Cattle of no kind will thrive but in the maſter's eye: every variation of the ſeaſon to be remarked; the lucky moment for ploughing, harrowing, ſowing, reaping, *&c.* to be caught, and uſed with diligence and foreſight; fences for ever to be attended to; and, in ſhort, a million of other things, which require conſtant thought and endleſs application.

That ſingle article, the employment of labourers, will alone run away with the profit of the whole farm.

When theſe points are conſidered with ever ſo little attention, ſurely the opinion I have adopted will not appear unreaſonable. The advantages of the farmer over the gentleman will be ſeen evidently, not enjoyed, indeed, without ſome deſert; for few of the

latter,

latter, I apprehend, can addreſs their countrymen in the words of *Creſinus*: *Nec poſſum vobis oſtendere, aut in forum adducere, lucubrationes meas, vigilias, et ſudores.*

But ſurely it appears plainly, from what I have ſaid, that the unprofitableneſs of farming is ſcarcely ever owing to the art itſelf, but the miſtakes of thoſe who practiſe it.

As I have been ſo particular in diſtinguiſhing ſeveral points by which the followers of it loſe, I ſhall now treſpaſs a little longer on the reader's patience, and give my ſentiments on the cuſtom of gentlemen's farming, in other reſpects than that of profit, to thoſe who are not ſolicitous about it, and in relation to it, to thoſe whoſe fortunes will not allow an indifference to ſuch a point.

It is ſcarcely poſſible for a gentleman to live in the country without finding many inconveniences in not keeping a team of farming horſes, with waggons, carts, *&c.* and other implements uſed in the buſineſs of huſbandry. While

profit

profit is not conſidered, there will flow a multitude of agreeable circumſtances from farming, which will have ſome relation to almoſt every particular of a country life.

In reſpect of entertainment, what more rational, or more amuſing, than country buſineſs, without the anxiety of caring for profit! The public good calls loudly to all gentlemen to keep ſome land in their hands, that experiments may be made, and modes of agriculture purſued, different from the practice of the neighbourhood, for the farmers, at leaſt, to ſee that their own cuſtoms are not the only good ones, and that there are improvements to be made even on *their* practice.

All the improvements and new inventions in agriculture come from gentlemen; ſcarcely one, that I ever heard of, is known to have been diſcovered by farmers.

I do not wonder at this, for I think it is natural enough; but, at the ſame time, it is a ſtrong reaſon for gentlemen's farming, whether they make pro-

fit

fit by it or not. The expenſive uſe of manures, and introducing a garden culture into the field huſbandry, were the effects, among a hundred other inſtances, of gentlemen's farming.

But if the public good was not to be conſidered, yet the mere amuſement of farming, to a gentleman of fortune, who has the leaſt taſte for country buſineſs, muſt plead warmly for its practice. Such farmers ſoon make a garden of their eſtates, at the ſame time that they improve the value of them.

What can be more amuſing than experimental agriculture? trying the cultivation of the new-diſcovered vegetables, and all the modes of raiſing the old ones; bringing the earth to the fineſt pitch of fertility, and growing plants infinitely more vigorous and beautiful than any in the common tillage; uſing the variety of new machines perpetually invented, and obſerving their effects; and in a ſmall extent of ground, ſeeing the growth of an infinite variety of vegetables, unknown in the common practice; perpetually enjoying

joying the neatneſs of huſbandry, that *ſimplex munditiis* of farming which gives the moſt beautiful colouring to every object around, and pleaſes the refined imagination with the enchanting proſpect of all the elegance of nature.

Thoſe gentlemen of ſmall fortunes, who, if they practiſe any thing of farming, find it neceſſary not to be indifferent to profit, have many points to conſider.

Such an one ſhould remember, although a farm will afford amuſement, it will not yield profit without application. A conſtant attention to every article is highly neceſſary. He ſhould keep the exacteſt accounts, and make memorandums of what knowledge he can pick up. For a few years he muſt employ a bailiff; and he will find that every day and hour will encreaſe his own knowledge, if he is attentive to the buſineſs.

Let him beware of trying experiments from books, except *in ſmall.* It is twenty to one but he loſes by them,

if

if he does not begin with little patches of ground, to gain ſome experience, before he ventures on a whole field. All the work that is poſſible, he muſt put out to his workmen *by the piece*; if he employs many by the day, I aſſert it is impoſſible to make any thing of farming. Let him, when he begins, apply a ſufficient ſum of money for that purpoſe; for he will find it a more expenſive buſineſs than he may imagine. I repeat it, if he does not keep regular accounts, he will certainly be a loſer.

If he has his choice, he ſhould not think of farming leſs than an hundred a year, in a rich country.

Of the Uſefulneſs of acquiring a Knowledge of Foreign Practices in Huſbandry, with ſome Hints toward attaining and propagating that Knowledge; particularly recommended to the Notice of the Society inſtituted for the Encouragement of Arts, Manufactures, and Commerce.

AGRICULTURE, I believe, is carried to greater perfection in *England* than in any other country of *Europe*; nevertheleſs, we are certainly very far removed from that point of perfection to which we might arrive: nor is this kingdom in general, I apprehend, near ſo thoroughly cultivated as the empire of *China*, if we may at all credit the beſt accounts we have of that region.

I conceive that ſcarcely half the kingdom is at preſent in an actual ſtate of cultivation: mountainous and fenny tracks, downs, heaths, moors, &c. form an immenſe quantity of land, which

few, I believe, will think abſolutely incapable of culture.

Agriculture, in the fineſt parts of the kingdom, is not known ſo perfectly as to render the cloſeſt attention to improvement needleſs or unprofitable. If an exact regiſter had been kept, for a century paſt, of any tract of land, or farms, diſplaying the produce of every kind, we ſhould find it in an uniform progreſſion of encreaſe. The beſt authorities which curious men have been able to conſult, diſcover the encreaſe of our growth of corn, which is a palpable demonſtration of an improving huſbandry: and the experience of many thouſand intelligent men will ſhew us, that we are yet very far from that perfection which we ought to ſtrive to reach.

Nothing can contribute more to ſpreading a general knowledge in agriculture, and to make known to every part of the kingdom the methods followed by all the reſt, than a general receptacle of farming intelligence, publiſhed frequently.

But

But there yet remains a large and important ſource of knowledge in this branch, which it is impoſſible ſuch a work ſhould near comprehend.

I fancy there are few reflecting men who will aſſert, that all improvement can come only from ourſelves, and that various points of knowledge in agriculture cannot be gained from the practice of foreigners.

The cultivation of the earth may be in a far more flouriſhing ſtate in this kingdom than in many parts of *Europe*; but we ought not from thence to conclude, that other nations, who have not the peculiar bleſſings of liberty and ſituation which we poſſeſs, cannot make great and ſtriking diſcoveries in agriculture, however poorly they may contribute to their general good.

It is not our ſuperior ſagacity to which we are indebted for the poſſeſſion of ſo happy a ſtate of tillage; it is to that admirable ſpecies of liberty, which gives us a being ſcarce known

in any part of *Europe*, the ſubſtantial huſbandman.

However ſuperior we may be in this reſpect to the reſt of *Europe*, we ought to remark, with attention, the innumerable methods of huſbandry practiſed by the reſt of the world, compare them with our own, make experiments of their reſpective merits, and, without prejudice, adopt all that are good.

Let us make ſober and rational experiment the foundation of our knowledge, and let us determine to admit every method that experiment proves to be better than our own.

If this is really the ſenſible manner of proceeding, our buſineſs is to render ourſelves acquainted with the practice of foreign countries down to the minuteſt particulars. But where is this knowledge to be gained? The nobility and men of large fortune travel, but no farmers; and unfortunately thoſe who have this peculiar and ſtriking advantage, this noble opportunity of benefiting themſelves and their country,

ſeldom enquire, or even think, about agriculture.

The age at which our *Britiſh* youth travel, is an inſurmountable obſtacle to the poſſibility of their country being the better for it. If any one in a more mature age undertakes the tour of *Europe*, how few give any material attention to the cultivation of the variety of land they are obliged to paſs over! If a traveller has the parts and abilities neceſſary for ſuch obſervation, fewer ſtill have that degree of knowledge in farming which is neceſſary to ſee the advantages of any practice, and the points in which it promiſes to be ſerviceable at home.

It muſt be expected, that thoſe who travel ſhould conſult the common advantages reſulting from that part of education: a general and polite acquaintance with the knowledge of the times is reaſonable; and a man of literature, taſte, and ſentiment, meets with ſo much to catch his attention, and pleaſe his imagination, in the acquaintance of the *literati*, and the ſtudy of

that profuſion of the productions of the fine arts, ſo common abroad, that it is not to be expected he will attend much to agriculture.

It muſt not be thought that a plough will come in competition with the glowing tints of a *Correggio*; or the breed of a cow, or a ſheep, interrupt the ideas of beauty and delicacy raiſed by the view of the *Venus de Medicis*.—Travellers muſt ſacrifice to the Graces.—Happy for their country if they would give ſome little attention to public utility!

It is to me ſurpriſing, that among the men of ſenſe and reflection who have travelled, and publiſhed their remarks, ſo few have thought agriculture worthy their obſervation. Buildings, paintings, ſtatues, relicks, and curioſities have been recorded, criticiſed, and copied without end. Of all the journals of travels I have read, ſcarce one gives any idea of the ſtate of agriculture, and the methods of practice followed in the countries it deſcribes.

But

But the complete knowledge of foreign agriculture, which I could wiſh was poſſeſſed at leaſt by one of my countrymen, and publiſhed for general advantage, is not to be acquired by our young nobility and gentry while they travel on the plan at preſent generally adopted; nor is it to be met with in any book of travels hitherto publiſhed.

Let us ſuppoſe a proper perſon to undertake the tour of *Europe*, or a part of it, merely to render himſelf perfectly acquainted with every particular, the leaſt worthy of obſervation, in the practice of agriculture, of every country through which he paſſes. Such a perſon, however he might caſually amuſe himſelf in a city, ought to deem *the country* the ſcene of his travels, and every where take up his abode in a village. He ſhould, in general, avoid the roads purſued by travellers, and take his route through provinces where foreigners ſeldom appear. He ſhould be very ſlow in his motions, reſiding ſome time in any place where he finds mat-

ter for obſervation. If any thing ſtriking occurs in the practice before him, he ſhould attend the culture of the lands, the ſowing and harveſt; and manage his route in ſuch a manner, that this plan may not occaſion an unneceſſary reſidence, nor a needleſs diſtant removal from one place to another. The ſoil ſhould always be an object of his attention, in every variety, and the grain, or graſs, which ſeems beſt to ſuit it. He ſhould make drawings of every machine and implement of huſbandry that differs from thoſe of his own country, and obſerve particularly the reſpective methods of working them. He ſhould procure ſeed of corn and graſs, and ſome of the breed of remarkable cattle, ſending them to *England*, with directions on what land to be ſown, and on what graſs to be fed. In ſome countries this may be prohibited, but it is allowed in many: in a word, the whole œconomy of agriculture in every province ſhould be obſerved and minuted; the manner in which lands are rented, the covenants,

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the method of cultivating them where the landlord farms, and all upon his eſtates are either his ſervants or his ſlaves. It would not be amiſs to remark alſo the methods of making and repairing the roads in moſt countries; all the effects of the laws and police reſpecting the poor; not to ſtudy them in books, but to view their effects among the very people concerned. Some hints might poſſibly be caught, worthy the attention of the *Britiſh* legiſlature itſelf.

On ſuch a plan, I ſhould think it adviſeable to take the route of *Holland*, *Flanders*, *French Flanders*, *Lorraine*, and the provinces adjoining; *Champagne*, *Burgundy*, *Frenche Compté*, *Lyonois*, and then a-croſs to *Normandy*, *Britanny*, *Orleanois*, and *Anjou*; the marquis of *Tourbilly*'s admirable *Eſſay ſur la Défrichements* opens a fine field of obſervation in this province. All his noble improvements ought to be viewed with the moſt attentive eye: the preſent condition of his eſtate compared with the unimproved neighbourhood, and

minute obſervations made on the effect of every meaſure he took. To take a ſurvey of his territory, with his Eſſay in one's hand, muſt be an entertainment of the higheſt degree, as well as nobly inſtructive. From *Anjou* the tour ſhould continue through *Guienne*, *Languedoc*, *Provence*, *Dauphiné*, *Gaſcony*; then to enter *Spain*, and travel towards *Galicia*, whoſe inhabitants are more induſtrious than moſt *Spaniards*, and return to *Catalonia* and *Valencia*, the latter province being the garden of *Spain*, and the natural productions well worthy the attention of a farming traveller.

I have heard Mr. *Mercè* of *Bath*, who ſerved in *Spain* under the earl of *Peterborough* and lord *Gallway*, and who has reſided in moſt parts of *Europe*, declare, that *Valencia* was the fineſt country he ever beheld, and the moſt plentiful one to forage in; that it abounds with vaſt quantities of ſweet nouriſhing graſs, which grows to the height of four feet; beſides other ſpecies equally advantageous. Thoſe who object the great

great difference of climate between *England* and *Spain*, ſhould remember that many of our fruits and moſt uſeful plants are the natural inhabitants of much warmer countries; and that lucern is traced even to the hotteſt climes of *Aſia*.

The reſt of *Spain* might be omitted. I would not be underſtood, however, to imply that it contains nothing worth obſervation. Not a country can be named but ſomething uſeful might be learned in it by a traveller, who made ſuch a ſcheme as I ſketch his buſineſs.

Returning through *France*; the *Alps*, *Savoy*, and *Switzerland*, ſhould next engage his attention. The latter country, I am informed, will preſent to an attentive traveller many particulars in agriculture, and the breeding and management of cattle, well worth a minute obſervation. The neighbourhood of *Geneva* ſhould be particularly attended to, and the reaſons diſcovered why the common huſbandry is ſo miſerable, in compariſon with that of

England,

England, as it appears to be in the experimental writings of M. *de Chateauvieux*. The ſtate of the new huſbandry ſhould be remarked, and the whole management and profit, as ſome hundreds of acres were employed in it. The principal territories in *Lombardy* ſhould next be viſited; the practice of plowing with buffalo's examined; and the advantages and inconveniences of the exceſſive long *Italian* ploughs minuted. The ſouthern parts of *Italy* ſhould next be taken, and remarks made on the different ſtate of agriculture in *Tuſcany*, and the pope's and king of *Naples* continental dominions; with the reaſons for ſuch difference. The effects of the duties on exported corn in *Naples* ſhould be minutely obſerved; they would doubtleſs furniſh many arguments in favour of our bounty. "Some years ſince at *Naples* there was ſuch an amazing harveſt through the whole kingdom, that they had upon their hands a quantity to the amount of two or three hundred thouſand pounds in va-

lue,

lue, which they could not conſume. There was at that time an application made for the exemption of the duty on exportation, without which the merchant could not find his account in ſending it abroad; and though the miniſter was informed by ſeveral, and, amongſt the reſt, by an old *Neopolitan* gentleman of my acquaintance, that the revenue would certainly feel the good effects of ſo much money brought into the country, as fully as in the ſhape of a duty on the export, he was deaf to all their reaſonings, and would not eſtabliſh ſo dangerous a precedent, as he thought it; the conſequence was, that the corn grew mouldy and periſhed, and the next harveſt failed, and a dreadful dearth enſued *." *Sicily* comes next; that iſland is well cultivated, and, doubtleſs, ſome uſeful knowledge might be gained from its inhabitants.

If the plan was found practicable, which I am informed is really the caſe,

* *Sharp*'s Letters from *Italy*, p. 224.

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the beſt way to return towards *Germany* would be by the *Turkiſh* provinces on the *Adriatic Sea*, and enter the *Auſtrian* dutchies, making the whole tour of *Germany*, particularly thoſe parts of it which border on the great rivers, and the *Pruſſian* dominions, the peaſants in which are reported to be as happy as in moſt parts of *Europe*, excepting our own, and that owing to the amazing regularity of the government, and the ſtrict execution of juſtice. The tour of the north ſhould be proſecuted through *Poland*, *Livonia*, *Finland*, *Ruſſia*, *Sweden*, and *Denmark*.

The other parts of the globe—none ſhould be omitted—would require various perſons. The moſt populous countries are moſt worthy attention, as that circumſtance is, at leaſt, a reaſon for the probability of a lively cultivation.

In this whole tour, an exact and minute journal ſhould be kept of every remark made on the infinite variety of objects

objects that would occur, all the information that could be gained from the inhabitants of every country, and ample descriptions of the whole process of cultivation where it was found worthy recording; and the author, on his return home, should communicate this extensive work to the public, as a general source of knowledge and improvement, and a monument of his own abilities, his industry, and application:—the most useful book of travels that ever appeared in the world!

Fully am I persuaded, that was such a tour as this executed by a proper person, or rather persons, great and important advantages would result from it. Species of plants, methods of cultivation, and many implements and machines at present totally unknown in *England*, would be discovered, and, after experiments, adopted. I may be mistaken, but in this light it strongly appears to me.

So great and arduous an undertaking, to be perfectly executed, would require

require peculiar abilities and advantages in the perſon who attempted it.

He ought, in the firſt place, to have a competent knowledge of the methods of cultivation uſed in general in *England*; and this knowledge ſhould reſult not alone from books, but alſo ſome years practice, that he might be well acquainted with the advantages and defects of our preſent modes of huſbandry, and our principal implements uſed in them: and that he might readily perceive wherein foreigners have the advantage of *us*, he *ſhould* be a man of penetration, quick conception, thoughtful and attentive; the ſcope of his travels would require vigour and activity. The variety of people he would have dealings with would render a pliancy of diſpoſition, patience, and dexterity, equally important. He ſhould be a maſter of the principal *European* languages. He ought to have ſuch a proficiency in drawing as to be able to ſketch, in

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the moſt accurate manner, machines of all kinds, and plants. A knowledge of botany would alſo be neceſſary for the deſcription of the new plants he might think deſerved his attention: and, to crown all, he ſhould have an ample revenue for numerous purchaſes, and to ſmooth innumerable difficulties.

Theſe qualifications, I believe every one will allow are neceſſary; but where are they to be found?

The utter improbability, or, I may ſay, impoſſibility of this is alſo evident: but I do not conceive that the advantages reſulting from the ſcheme ſhould be loſt for want of ſome particulars to render the execution the more complete. A practical knowledge of *Engliſh* farming, and a ſlight acquaintance with drawing, would be abſolutely neceſſary, joined with as much penetration, quickneſs of parts, and ſolidity of reflection and conduct, as could be found. It is very improbable that ſuch a man, if he had an

ample

ample fortune, would engage in the undertaking, and equally unlikely that a rich man would be properly qualified were he willing.

Much, in ſuch caſes as theſe, if they are deſerving attention, is to be hoped from the munificent public ſpirit of the Society for promoting Arts: no where can better judges be found of a proper perſon to execute ſuch a plan, or, when found, to give him proper inſtructions. I flatter myſelf, that we ſhall one day ſee their bounty exerted in executing ſome ſcheme of public utility of the ſame nature as that I have ſketched: their improvements on the ideas of individuals in ſuch caſes will doubtleſs be ſtriking; and, however incomplete this eſſay may be, was the plan ever to come within their attention, it would certainly turn out to the benefit and inſtruction of the whole kingdom.

* * *

SINCE the foregoing was wrote, I have read, with that attention ſo excellent a book deſerves, Mr. *Harte*'s *Eſſays on Huſbandry*. This moſt penetrating author has proved clearly the great advantage which muſt attend an accurate obſervation of the foreign methods of huſbandry: he ſpeaks from his own experience, having travelled like a true philoſopher, and a good citizen. What pity that a man with ſo enlightened a genius, poſſeſſing every requiſite I have ſketched, ſhould make ſo large a part of the tour without publiſhing his travels! From page 62 to page 84 of the *Eſſays* contains a ſpecimen of what the world would have enjoyed in ſuch a volume. I ſcarcely know in the range of literature, a work, the want of which I more regret. Would the author, even at preſent, favour the publick with more particulars that attracted his attention abroad, in relation to huſbandry, they

would form an admirable ſecond part to the incomparable *Eſſays*. Some few paſſages give us hopes of a ſecond part: it would be a publick misfortune, if the author ſhould change his mind. It is too like preſumption in me to venture theſe ſheets to the preſs after the publication of ſuch a work, which ſuggeſts ſo much more than it expreſſes; but, as I have been particular in the project of diſpatching a proper perſon abroad, and as I do not remember that author mentions ſuch a ſcheme, I am tempted to proceed this once in a path ſo lately trodden by a very *Magliabechi* in agriculture. I cannot avoid here taking notice of the miſerable idea a writer, who ſigns himſelf *Mago*, has of this incomparable volume. He criticiſes that excellent work in an extract from it: but his total inattention to its value, and to the ſubject of it, appears from his finding fault that it was not contained in a letter to the *Muſeum Ruſticum*. Not a needleſs ſyllable is in the book; when read by a man of education and taſte for agriculture:

but

but as for farmers, who ever ſuppoſed it was wrote for their reading? The author knew too well, that they will never, by books, be induced to cultivate any thing out of the common road, to addreſs himſelf to them. How little anxious for the improvement of agriculture muſt any one be, who can regret ſix ſhillings for the *Eſſays on Huſbandry!* abounding with a vaſt variety of knowledge, the moſt enlarged reflections, the moſt uſeful advice; and containing the beſt, completeſt, and moſt ſatisfactory practical directions for the culture of lucern, of any author in any language, on that or any parallel ſubject.

Mago's objections are ſcarcely worth notice, and in this caſe can ariſe from nothing but his not having ſeen the book.

FINIS.

ERRATA.

Page 5. line 6. *for* contain, *read* contains
21.——20. *for* believe is the caſe, *read* believe is the caſe)
54.——13. *for* their, *read* the
57.——21. *for* is tumbril, *redd* is a tumbril
65.—— 5. *for* I omit, *read* I omit them
74.——12. *for* was, *read* were
83.——13. *for* requires, *read* require
104.——16. *for* their, *read* the
23. *for* coſts, *read* coſt
105.——20. *for* coſts, *read* coſt
107.——25. *for* requires, *read* require
112.——12. *for* comes, *redd* come
123.——15. *for* renders, *read* render
127.——19. *for* is, *read* are
137.——11. *for* view ſuch, *read* view the fields of ſuch
163.—— 4. *for* that ſet, *read* the ſet
189.——27. *for* Jourbilly, *read* Turbilly
196.——15. *for* with, *read* againſt
311.——21. *for* Jourbilly, *read* Turbilly
22. *for* Eſſay ſur la Defrichements, *read* Mémoire ſur le Defrichemens.

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